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## The Massachusetts Medical Society

### THE ANNUAL DINNER

THE Annual Dinner of the Massachusetts Medical Society was held in the Ball Room of the Hotel Statler, Boston, Massachusetts, on Wednesday afternoon, June 8, 1927, at two o'clock, Dr. James S. Stone, President of the Society, presiding.

**PRESIDENT STONE:** Fellows of the Massachusetts Medical Society and Guests: In 1828 Dr. George Cheyne Shattuck delivered the Annual Discourse before our Society. From 1826 to 1840 he was President of our Society. He was prominent in the activities of the Society and in movements to protect the public health for a great many years. His son, George Cheyne Shattuck, was a professor in the Harvard Medical School from 1855 to 1873 and was President of the Massachusetts Medical Society from 1872 to 1874. His son, George Brune Shattuck, was for thirty years the Editor of the BOSTON MEDICAL AND SURGICAL JOURNAL and President of the Massachusetts Medical Society from 1910 to 1912. Another son, Dr. Frederick Cheever Shattuck, is here today.

The members arose and applauded.

**PRESIDENT STONE:** Dr. Shattuck is the beloved teacher of all of us. (Applause.) He has a son who is a leader in medicine, particularly in matters concerning public health and tropical medicine.

In spite of all his family tradition, another son has strayed into the law.

I don't know whether this man on whom I am going to call has any regrets that he is not in medicine, but he is devoting his great ability to the public service and is one of the most honored and most useful members of our Legislature, the Honorable Henry Lee Shattuck. (Applause.)

**HON. HENRY LEE SHATTUCK:** Mr. President, Ladies and Gentlemen: I am afraid that I have strayed from the fold which my father and my father's family have been following for many years.

By reason of family associations and traditions, I have watched with special interest and pride the great progress the medical profession has made and is making in the advancement of medical knowledge. I know something of the

unselfish devotion of medical men in the promotion of the public health. In these matters your Society has been a leader. By inviting me to address you on this occasion, you have done me an honor which I deeply appreciate.

Acting on the suggestion of your President that I choose my own subject, I am going to review very briefly the more important medical legislation and the development of state institutions for the care of the sick during the last ten years, that is, from 1918 to date.

I shall take up these subjects in the order named.

I appreciate that in the biological sciences legislation as a rule plays a very small part. The discovery of surgical anaesthesia, for example, and the application of that discovery, required no legislation. That great discovery, like all others in medicine, was given to mankind freely and without restriction, and its use spread throughout the world without the aid or need of legislation. Nevertheless, legislation has its place, particularly in the field of health protection.

In 1918 and 1919 we were engrossed in war and post-war emergency measures, and I find no important health legislation. In 1920, we authorized cities and towns, either alone or in conjunction with others, to maintain health clinics and to conduct campaigns in health legislation. In 1921, notable progress was made in the recognition of the importance of mental diseases. We made psychiatry a required subject in examinations for registration; and we provided for impartial mental examination of persons indicted for capital offences, and for commitment to a state hospital without trial of those found mentally irresponsible. In 1922 we established a Division of Mental Hygiene in the Department of Mental Diseases, for the study of the causes of mental disease. In the same year we provided for cooperation with the Federal Government in the tuberculin testing of cattle, and for compensating the owners of condemned cattle. In 1924 we provided for psychiatric examination of prisoners. The reports of these examinations should be of great value not only to correctional authorities, but also to students of mental disease and feeble-mindedness.

During the present year we have passed legislation to strengthen the tuberculin testing law, and we have passed a law for the licensing of pasteurization plants. Whether tuberculin testing is needed as a health measure, or can only be justified, if at all, as an economic measure for the promotion of agriculture, is a question which we should decide before we make any further commitment. No less an authority than Dr. Theobald Smith has expressed the opinion that tuberculin testing is an economic rather than a health question. Other qualified authorities disagree with this view. What course should we pursue? I am sure that your Society can be of much assistance to us in reaching a wise decision.

On the negative side, we have defeated numerous attempts to break down the single standard of registration of those desiring to practise the healing art, and we have defeated all proposals to weaken the vaccination law. On the other hand, we have failed to extend the law to children in private schools. But in each of the past two years the private school bill has passed the House, the sentiment in favor of it is gaining in force.

We have investigated the question of reorganizing the Board of Registration in Medicine, of strengthening the requirements for admission to practise, and of restricting candidates to graduates of approved medical schools. But no legislation on these subjects has been enacted. Some persons feel that it would be unwise to give any board the absolute power to approve or disapprove medical schools. Others see in the proposals an attempt to form a medical trust which might increase fees and make it hard for the poor man to enter the medical profession. I rather think that much of the opposition might be removed by a programme stressing stricter and more comprehensive examinations for registration, including more in the way of oral examination and practical demonstration, and more adequate requirements concerning courses of medical school study, including perhaps a minimum curriculum, and concerning minimum medical school facilities and hospital training. In the carrying out of any such program the support of the general public should be enlisted. This can be done if the programme is carefully prepared and explained. The widespread public interest in all matters of health has been shown time and again by the response both in unpaid service and in contributions to appeals for hospitals and other agencies for promoting public health. Show the public that the measure you advocate is in the interest of public health, and the victory is won.

I now come to the subject of institutional development. For the care of the sick and insane, Massachusetts spends more than for any purpose except highways and other activities of the Department of Public Works, for which a

slightly larger expenditure is made. In the current year, for instance, we appropriated for the Department of Mental Diseases \$10,532,469.76, for the Department of Public Health \$2,110,295, and for the State Infirmary at Tewksbury and the Hospital School at Canton (both in the Department of Public Welfare) \$1,242,060, a total of \$13,884,824.76 out of a total budget for all purposes of \$52,411,349.56. In other words, over one-quarter of our entire expenditure was devoted to purposes having to do with public health.

In the Department of Public Health we have four tuberculosis sanatoria and a cancer hospital; and in the Department of Mental Diseases we have fifteen institutions, consisting of the Psychopathic Hospital, the Monson Hospital for epileptics, three hospitals for the feeble-minded, and ten for the insane,—and we are about to establish one more for the insane. The approximate patient population of these institutions, and of the two in the Department of Public Welfare to which I have referred, is 24,000, and there are about 4,500 doctors, nurses, and other employees. The insane and feeble-minded patients alone constitute about one-half of one per cent. of the population of the entire State. I mention these figures in order to give you a picture of the magnitude of our undertaking.

To keep up with the need for more and better accommodations, a large annual capital outlay is required. During the war and immediately after the war, our programme was interrupted, but of late we have had some success in catching up.

Among our more important accomplishments have been the following:

We have greatly enlarged the Northampton and Gardner hospitals for the insane. In 1922 we opened a new hospital for the feeble-minded, at Belchertown. We have improved the hospital facilities at Tewksbury. We have erected a building for the care of sick children at the Canton Hospital School. We have enlarged the Reading State Sanatorium and remodeled it for the care of children. As part of this programme, we have established clinics for the detection and cure of incipient cases of tuberculosis among children. We have remodeled the Lakeville State Sanatorium for the care of cases of non-pulmonary tuberculosis. We are about to open a hospital at Norfolk for the care and treatment of cancer cases, and we have authorized the purchase of radium for use in this institution and at the cancer clinics which have been established at various centers throughout the State. We have authorized a new hospital for the insane, at Waltham, to have an initial capacity for 1,000 patients and ultimate capacity for 2,000 patients, and we have provided this year \$1,500,000 toward the cost of its construction.

I have given you in brief outline the record of the past ten years. While in matters of legis-



lation progress has been distinctly moderate, I believe that I am safe in saying that at least we have not done much harm. Institutional development, on the other hand, has shown marked progress, but no greater than required to provide for the ever-increasing population of our institutions for the insane and feeble-minded and for the increased scope of our activities, of which the cancer hospital is the most noteworthy example. These demands for new and enlarged hospital accommodations must raise in your minds, as they do in ours, many serious questions. Is there no way of limiting this enormous expense? Are there no effective preventive measures which will decrease insanity and feeble-mindedness? Must we, as in the case of cancer, undertake the care of other chronic diseases? These are some of the problems on which we need your help and counsel.

I cannot close without a word in praise of the men and women of your profession who are serving in our health department and in our hospitals. It has been my privilege to consult frequently with the Commissioner of Health and his assistants, and to visit all the state hospitals. I have been through every ward in these hospitals. I have inspected the kitchens, storerooms, and farms. I have interviewed the superintendents and others in authority. A more loyal and devoted body of men and women I have never seen. They are a credit to your profession and to the Commonwealth.

**PRESIDENT STONE:** You have listened to a most masterly and complete presentation of one of the greatest problems which confronts our state. You have heard the challenge to the medical profession to help in the prevention of disease. You have heard the challenge also to show the public the reasonableness and the justice of what we seek, to use Mr. Shattuck's words, "to show the public that what we ask is in the interest of the public health and the victory is won." That challenge is issued to every one of us.

We have listened to the son of a physician. I am going to call now upon a man known to some of you as a minister, to some as an essayist, and to some as a keen philosopher, but we also, some of us, like to think of him as the father of a physician. Possibly he may be able to tell us something more about our faults.

It is my privilege to introduce the Reverend Samuel McChord Crothers. (Applause.)

**REV. SAMUEL MCCORD CROTHERS** spoke as follows: I was at dinner the other day with Dr. Harvey Cushing and he asked me why it is that so many of our physicians, and particularly the men in the medical school, are the sons of ministers and I was very glad to know that fact on his authority as he seemed to have been making a study of it, but I couldn't really give any account as to why the sons of ministers become

doctors other than the general American desire of the younger generation to improve their condition. (Laughter.)

I have, however, as a minister, always had a leaning to the medical way of dealing with questions public and private and it has always seemed to me that the professions, the great professions, all are doing the same kind of work, that the same kind of mind succeeds in one as in another.

Some years ago I wrote an essay on literature and I called it "The Literary Clinic," taking the analogy of clinical medicine and applying it to literature for it seemed to me to apply perfectly. There are all kinds of books and the book does something to the reader who takes it up. It may be a soporific or it may excite the mind. It may put one to sleep or it may drive one insane, but it does something to us, and the student of literature is really one who is practicing clinical medicine.

I was very much pleased after the publication of that essay to get a letter from Buffalo saying that such a literary clinic was established in Buffalo and last year I was in Buffalo and was a guest of the literary clinic that had been going on from that time under expert medical and literary advice and I felt almost as if I were a doctor.

Now, what is it that the members of the profession of medicine do besides giving us their individual skill? What is it that they do as citizens of this country? One of the things that I think you do to all of us is give us a way by which we may approach the different subjects with which we have to deal. It doesn't matter very much what they are. The great problem is to get the right kind of approach, and it seems to me in the development of the science and the practice of medicine you have given us that which makes you leaders in the community, and the community needs not simply the skill of the physician, but also it needs the point of view that you have naturally acquired in the progress of your profession. Take for example, dealing with moral questions. Take the way in which the City of Boston is trying to deal with literary subjects today. A book is supposed to be dangerous. Who says that it is dangerous? Dangerous to whom or to what? How can the community protect itself from intellectual or moral dangers that come through the medium of the printed page?

The author of a prohibited book is coming to Boston and is testing it out by reading a chapter on Boston Common. What would you gentlemen think of that way of treating a disease, a contagious disease? Would you have it sufficiently tested in that way?

One person reads a book; another person declares that it is immoral. Then somebody else reads it to see whether it is as bad as it was said to be. Then the emancipated critics read

it and say, "If that is so, then it is *prima facie* evidence that it is a work of genius." (Laughter.) Then the careful parent says, "At any rate, it is not the kind of a book that I would give to my daughter." The daughter says, "You needn't bother about that. In talking about that particular book you are dated. I read it last summer."

Then the whole question comes over again in regard to protecting public morals. Now I believe that the questions that are coming up to us on all sides, questions of morals, questions of politics, questions of religion, need the kind of mind that is developed in the true physician, the dealing with evil not as something to be afraid of, not as something where we can jump at conclusions, but carefully and by the experimental method.

A hundred years ago Shelley wrote of a new school of poets.

"A poet there was who sat by a ditch  
And he took an old cracked lute  
And he sang a song that was more of a screech  
Against a woman who was a brute."

Now you can say from the moralistic standpoint, "How terrible!" The physician, the man who is trained in diagnosis, would want to go further than that. He would want to know the antecedents of the poet and he would want to know the character of the ditch and he would use some of the methods of preventive literature and he would use it according to some scientific rule.

Today one of the most astonishing things to any observers of America is the difference between such a body of people as I see before me today, or any corresponding group of professional men, men dealing with religion, dealing with social service, the difference between your way among yourselves, the way in which these selected people are dealing with great problems and the actual attitude of the great mass of Americans. I think one of the greatest dangers that we are facing today is getting the leaders interested in their professional problems and their professional advancement, getting them out of touch with the great mass of the people.

What do we see? Here in the most enlightened country, as we like to think, of the world, we are astonished at the outbreaks of sheer bigotry, sheer fanaticism, the outbreaks and the recrudescence of ideas which we had thought had been banished from civilized life. They come into the open. They are coming into our legislation. They are influencing the whole body of uninstructed public opinion.

Now what do we need? I think we need to get together. We need to stand for that class of men who are really doing the least to direct the life of our country today.

There was a class of people whom Milton declared as "That hapless race of men, that hapless race of men who have understanding."

What is the trouble with the race of men, the groups of men who have understanding in this country? It is that they are too modest about bringing the results of their own thought before the great mass of the people. They are afraid of making themselves conspicuous. They are afraid of breaking away from the routine of their own order.

I think the fact is that today we have enough instructive opinion, educated opinion, in this country, to change the whole complexion of American life. We don't need a man like Mr. Mencken to tell us about the yokels and the nit-wits and so on. What we need is a different attitude among the men who really know and the feeling on their part that they belong to a great company of intelligent, open-minded, tolerant people who insist that their will shall be done.

We are afraid of organized minorities, especially if these organized minorities are shrewd enough to hide themselves a little from public view and make a great noise, and we imagine that they represent public opinion. We fear some invisible empire and we need to confront it with a visible republic, to bring together a public opinion that shall be simple enough to be understood by the people. It must be an appeal to common sense, but it must be not uninstructed common sense, but instructed common sense, a super-common sense that shall hold its own with ignorance and superstition that have taken a great place in the actual work and life of our country.

I think the trouble with educated men and with the liberal-minded men is that nobody is afraid of them. We trust to great moral principles. A great moral principle is all right, but a great moral principle doesn't jump out at you in the night as you are going through the woods, and clutch you by its skinny finger and make you promise to be good. A great moral principle doesn't make a person feel as if an old witch were after him.

There are a great many people who are afraid. They are afraid of freedom of thought. They are afraid of experimentation. They are afraid of asserting their own common sense because they imagine that something that they call public opinion, is against them. If we could see that there are certain things which all educated men accept, that there are certain principles which they insist upon, no matter whether you are a physician, a minister of religion, whether you are a teacher in the public schools or the state university, whether you are a man of business, you want to have the sense of some great big body that is back of you, that you represent, and I think we are coming to see that, more than we have ever done, we are coming to see that civilization requires something more than highly specialized knowledge. It requires also a philosophy of life that will make us see our friends and stand together, and so I would speak to the

Massachusetts Medical Society not as a body of men apart, dealing merely with their own problem, but to you as citizens helping other men who are trying to do essentially the same thing for the public good.

There are certain vital principles which we have in common. Allusion was made to that great man who represents the spirit of two great professions, the law and medicine, bringing from his father the sense of what medicine was, bringing to it the idea of a trained lawyer—Mr. Justice Holmes. And let me say that he represents the three great professions, for his grandfather, indeed, was the honored minister for many years in Cambridge.

I was reading, as I like to read, Mr. Justice Holmes' conception of the meaning of his profession of the law. I think that which is vital in it brings a response to you in your profession, to me in mine. Speaking of what the law was and the spirit, he said:

"I have no belief in panaceas and almost none in sudden ruin. I do not think the United States would come to an end if the Supreme Court lost its power to declare an Act of Congress void. For most of the evils of the present state of law, I think, the main remedy is to grow more civilized. Judges are, after all, simple-minded men, and we too need education in the obvious. The time has passed when the law is the unconscious embodiment of the commonweal. It is now becoming the conscious reaction upon itself of organized society knowingly seeking to determine its own destiny, and it has behind it a great field. I have faith in a universe not measured by our fears."

If you were to get a definition, a single sentence, in which that which makes our different professions really one in spirit, wouldn't you get that thought that is in the mind of Mr. Justice Holmes?

That is what we are trying to do, to get "organized society knowingly to seek to determine its own destiny," and there are certain things which we are coming to see must be done by organized society determining its own destiny, and we in our various professions are simply, after all, the servants of organized society. We are doing with such skill as we may have acquired, doing consciously, what has been done blunderingly, and unconsciously, bringing our skill to determine the future of society. We have determined that our society shall be more healthy, more happy, more just, more beautiful, than the society out of which it has come, and we are determined and agree that only through free intelligence working by the methods of continuous experimentation can that work be done.

So, when ignorance and fanaticism raise their heads and threaten a man here or there who is trying to do his duty in a free society, I think the time has come when people ought to realize that we are all together, we are all in the same boat, we are all determined that the method of freedom working by the method of American society. (Applause.)

PRESIDENT STONE: In Massachusetts, we are proud of our Department of Public Health.

Our Commissioner of Health may tell us something of his problems. I present Dr. George H. Bigelow!

DR. GEORGE H. BIGELOW: Mr. President, Ladies and Gentlemen: It has been said that the most perfect example of anti-climax is the expression, "For God, for country, and for Yale." I think my appearing at this point on the program surpasses even that.

I have held the position which I now occupy for only a little over a year. I yet have much to learn about the problems with which I am trying to deal. I occupy a position which has been dignified by my predecessors, the eminent Dr. Walcott, so long the Chairman of the old Board, Dr. McLaughlin, the first Commissioner of Public Health, and my immediate predecessor, Dr. Kelley, and I consider it entirely unsuitable of me to appear on this program until I know something of the job. I think if Dr. Stone could have found anyone else—he approached me at a very late moment—he would have thought so, too.

I hope that in the few matters I may touch on you will consider that I am desperately serious because this is an unusual opportunity to speak to the organized medical profession in Massachusetts. The things we are interested in may eventually be accomplished if you are interested in them, too, and the things we are interested in can never be ultimately accomplished if you are not interested in them, too.

Mr. Shattuck said you were interested in anything which truly affected the public health. The converse has been said. I heard Mr. Vincent, President of the Rockefeller Foundation, say once that so long as the doors were closed and the press was not present, we might as well admit that none of us were really interested in the public health. We are often desperately interested in the private health when we ourselves are sick or members of our families. But as for true interest in the public health most of us have very little. The only people really interested in the public health are so interested because of commercial motives. That is an exaggeration and yet I am much impressed as to how much more motivating opposition is than support. If you read something in the Saturday night Transcript during the sessions of the Legislature that you disapprove of you are at the State House Monday morning, when the doors are open. But if you read something you approve of you say "That's splendid; someone is taking care of that," and you go quietly to bed.

There are at present a few very interesting problems which I should like to mention very briefly: First, the Legislature has directed us to study purification of shellfish by transplanting or chemical means. That is an effort to discover a safe way for human beings to consume their

own faeces and if it can be safely accomplished, we are in a fair way of discovering perpetual motion.

Another thing is the typhoid carrier. Recently three typhoid carriers, all professional food handlers have had their gall-bladders removed, and there is reason to suppose that they have been cured, though we will follow them at least a year. This, though slight, is perhaps the most definite contribution to the very baffling problem of the typhoid carrier that is a food handler that has been made recently.

Adequate pasteurization has been mentioned. It is surprising how many reasons there are for not accepting minimum rules. You can go up into the ivy-clad tower and by the light of a candle draw up rules which would protect perfectly and lo, you find in the first place nobody can supply such milk and if they could, it would cost a dollar a quart. Then you get "practical" and more and more "practical" and behold in the end you are not protecting. It is a very difficult compromise between the two conflicting extremes. The ideal and the over "practical."

We are trying to study the incidence of disease, especially the cancer problem. We have desecrated every home in Winchester by sending one of our inspectors there. With the radio there is no privacy and we could not see why we alone should respect these homes. This study is extremely important for us, and we are comparing Winchester with Shelburne Falls, as to the amount of sickness among adults, how it is distributed between wage earners and non-wage earners, how many are getting service from doctors, how many from cultists, how many from neighbors, or how many are medicating themselves. These and others are interesting problems and we have to know the answer because if there is any excuse for our existence, it is to have data on which to guide the development of these enormous programs Mr. Shattuck has outlined.

Then we are interested in rabies and in studying rabies. I think this may be heartening because some of you may have felt that with the amount of smoke and wind there is no such thing as study of this subject. I think the clinical experiment of reading a chapter on the Common, to which Mr. Crothers referred, is perhaps comparable in scientific exactitude to the biting of one innocent man by an equally innocent dog.

The venereal diseases are the most baffling problems of all communicable diseases. We hope to develop methods whereby for the same expenditure, we can at least double the distribution of our arsenicals. Then we are interested in the adequacy of the reporting of venereal disease. We have nearly ten thousand cases reported a year. Is that 5 per cent or 50 per cent of the actual number of fresh infections? It is probably somewhere in between 5 per cent and 25 per cent, with a minimum of 40,000 fresh infections annually. We are in truth a well syphilized community.

As Mr. Shattuck said, on Tuesday, June 21, we are to open the hospital at Pondville for cancer and unless our addressing machine breaks down, you will all receive invitations. Whether or not they are received, I hope you will come, not for what you will see there, but because of the enormous departure which the State is making in hospitalizing degenerative disease without the element of poverty present. We do not know where this departure will lead us but somebody must find out. The cancer clinics have been referred to and those are the preventive aspect of the problem and are the part of the problem that must be stressed in the name of humanity and economics.

I find that in the Department of Public Health we are in an anomalous position. The profession generally does not know much about what we are doing but has a vague feeling that anything we touch becomes state medicine as automatically as the touch of Midas turned objects into gold. On the other hand I find a certain fraction of the Legislature, and I think it reflects a certain fraction of the public, feeling that our only interest is to further the interests of the "medical ring." I am not clear what a "medical ring" is. All "rings" are under suspicion today except the wedding ring, and even that is, apparently, at times. I am also interested to know exactly what state medicine is, in which we are believed to be so thoroughly interested by some, and so thoroughly uninterested by others. I have heard it defined as service to the individual at the expense of the community. If that is so, we are thoroughly familiar with such service at the Boston City Hospital and elsewhere. I think to many people state medicine is a bugbear, like the shadow on the wall frightening the child on his way to bed. He does not know what it is, but is afraid of it. Many medical men have a definition something like this: State medicine is some sort of system which would force doctors, through some state authority, possibly the State Department of Health, to give inadequate service at starvation wages. I am not sure that that should be flattered by being called a definition. Too often it is discussed purely from the economic aspect. The principal objection I find to any system of which I have heard is that no system yet devised gives service on such an enormous scale with any assurance of quality. I do not think it is so important where the money comes from. If every doctor would be assured of a living wage, irrespective of his practice, it might be an improvement. But it is the lack of quality that is the Achilles' Heel of these systems.

I have had a liberal education in the past year in connection with the efforts in starting cancer clinics. I have come in contact with many magnificent men, magnificent in their conception not only of medicine but also of sociology and economics, and it has been very heartening. On the other hand, I have had some medical and lay



experiences less fortunate. It is rather interesting as showing the broad conception of the hospital we are opening at Pondville that one gentleman came to me who had been very much interested in the furthering of the cancer hospital and said, "I have a dentist who is very anxious to do some research work at the cancer hospital." I met the dentist and had a pleasant time. The principal reason for his interest was the fact that he had broadcast once on the subject of cancer and the dental profession. I have seen poor broadcasters, but this was exceptional. I told him I would keep him in mind. Six months later I met the gentleman who had mentioned him to me and said I was sorry, but I had found no place for his friend. "Oh, that's all right," he replied, "I have got another dentist." Some of the other experiences could perhaps be better written up by Mr. Sinclair Lewis than given by myself.

The solution, if there is any solution, in extending this service is that in each community where a clinic is started we must find at least one man with an appreciation of the medical, social, and economic aspects of the problem, on whose word we can depend. He can tell us whether a good job is being done or not. I think we are getting somewhere with the clinics. Dr. Stone, Dr. Greenough, Dr. Balch, have given us freely of their time. There is a curious precedent in Massachusetts for exploiting quality of service and fortunately it still exists, I think, as in no other state.

In one city where a clinic is started a physician told me that the cancer group, appointed by the local medical society representing the various hospitals, would meet to discuss cancer problems, matters of general hospital interest in the community would come up. It was the first time they had ever had such a representative group sit down and talk together. He thought it was a splendid thing medically and far outreached any service that might be given to cancer. In one of the cities there were nine patients at the first clinic. Six were cancerous. Three were operable but had never seen a doctor until they read of the clinic in the local paper. That was excuse enough for all the mouthings of the past year. Of course, cancer is a race against time. Dr. Leland's studies showed that the chance of cure of uterine cancer decreases one-half of one per cent daily. When you find the average delay is eight months, it is no wonder so few are cured. It is as much a race as getting anti-toxin in the diphtheria case.

Another clinic had at the second session forty-three patients and there had been a question as to whether there was any need for a clinic. The Huntington Hospital tells us that since clinic and educational work was started in Newton the cancer cases, from there have increased two or three times. We can tell how many come to the clinics. We never can tell how many go to the individual physicians' offices. But when you

realize that each doctor sees only an average of around two cancer patients in a year, and when we realize the difference in early diagnosis depending on the location we must realize that in many instances the physician alone in his office must have assistance. He must act as the filter to cull out those who need no further examination and those who do. Above all we must not indulge in the banality of patting the individual on the back and telling him to forget it, when it may really be early cancer.

Dr. Crothers has referred to the intolerance in this country. It is surprising. I suppose we have no idea of the wide sweep of intellectual fundamentalism over the country as a whole in the matters of crime, law, education, science and medicine as well as religion. There is a very considerable element of the public which is profoundly dissatisfied with medical service as they get it today. I had experience in a "wicked" pay clinic in New York. Eighty per cent of those who came there had been to a private doctor for six months or more for the same condition that brought them to us. Now in my negligible experience I am convinced that it is inherent in people of this country to seek medical service in the private doctor's office as long as they receive two things. The two things are: first, satisfaction, and second, service within what they consider their means. The ordinary man in the street would not believe you if he were told that a distinguished doctor would give the same quality of service at a clinic that he would give in the private office in the same amount of time. So I am convinced when satisfaction and service within their means are given, it is inherent to seek the physician privately. But these are matters of personal lay opinion and are tragically remote from quality of service. That is why the cultists blossom like the rose, and some of their Chesterfieldian manners might well be taken on by our less meticulous doctors.

What is the solution of all this? Of course, I would not be where I am if I had the solution. I don't know where I would be, but I would not be where I am. I think the solution of it, if there is any, is not along the lines of what the State Department of Public Health is accomplishing, but is along the lines of what the State Department of Public Health is trying to accomplish. So I must bespeak the support of all of you, not in the futile things we do, the incompetence we show in discussions with Ludlow as to what to do with the leper, and then in the meantime the leper disappears—and perhaps that is the best way to solve it—but for those general things for which we are striving. I bespeak this support not only for the public health, but for the future of the medical profession.

PRESIDENT STONE: Two years ago I asked you for your support. I thank you for that

support which has been given in much fuller measure than I had any right to ask. I bespeak that same support for my successor, Dr. John M. Birnie, President of the Massachusetts Medical Society.

Dr. Birnie arose while the members also arose and applauded.

PRESIDENT BIRNIE: Mr. Chairman and Fellow Members of the Massachusetts Medical Society: In the last few days you have heard a great many facts, figures, theories and new thoughts on a multitude of subjects, more things than you can thoroughly digest in a considerable space of time, and I am not going to try to add anything to the really wonderful class of papers

and addresses we have had in the last two days.

This has been an extraordinary meeting. I realize the honor which you have bestowed upon me and I also fully realize the difficulties and responsibilities of anyone who would attempt to guide the organized efforts of over four thousand physicians. I haven't any creed or thought, or anything definite to present to you at this time; in fact, I am rather hazy as to my exact duties, but I will say this much, that I will attempt to carry out most heartily the excellent policies which have been inaugurated by my predecessors.

The meeting stands adjourned.

The meeting adjourned at 4.40 o'clock.

## ORIGINAL ARTICLES

### THE DEVELOPMENT OF CARDIO-VASCULAR-RENAL DISEASE\*

BY JAMES P. O'HARE, M.D.†

THERE is so much misunderstanding, lack of knowledge and so much nonsense talked and written about hypertension that it seemed to me I could best serve you in the short time available by presenting and discussing the scheme of development illustrated in the accompanying chart. Such a scheme, based in large part on proven facts and to a lesser extent on theory as yet unproven, should serve to give you a correct conception of the fundamentals of hypertensive vascular disease and the interrelations of its various parts. With such an understanding firmly entrenched in your minds you should be in a much better position to interpret the various findings made in a given case, to make a better prognosis and to offer more intelligent treatment. It is an unintelligent thing in dealing with a hypertensive patient who happens to have dyspnea or cardiac pain to regard him merely as a cardiac case. He may die of a cerebral hemorrhage or even uremia. It is equally unintelligent to focus one's attention on the kidneys and expect uremia in a hypertensive patient merely because he shows albumin and casts in the urine. He may not have nephritis at all and is more likely to die of cardiac failure or a cerebral accident. You will agree with me, I am sure, that in many a case of so-called "cardio-renal" disease with albumin and casts in the urine the dyspnea, the edema, the albuminuria, the oliguria, etc., have been wrongly attributed to the kidneys when they should more properly be regarded as cardiac in origin. Such an error may be a very serious one because it often makes a very great difference in the treatment and perhaps in the prognosis. A correct understanding of the development of hypertensive vascular disease and the interrelationship of the

various parts is, therefore, eminently necessary.

One of the most elementary truths in vascular disease is that the hypertensive process which manifests itself first at 35 to 45 years of age has its beginnings very, very much earlier in life. We know that it must be a matter of extremely slow growth. Our investigations at the Peter Bent Brigham Hospital have taught us that heredity is probably the most potent etiological factor. Walker and I found that 76 per cent of our hypertensive cases showed a definite family history of vascular disease. By contrast only 38 per cent of a much larger series of non-hypertensive patients had such a family history. We have reason to believe that this 38 per cent is too high. While carrying out this study, we also made the extremely important discovery that a fairly large number (42 per cent) of patients with high pressure gave a history that indicated vascular disturbance very early in life. As boys about 10 to 12 years of age they had had frequent nose bleeds without apparent cause. They had had abnormally high color and flushed and blushed easily. Their hands were often blue and cold and clammy, especially in cold weather. The girls had had similar vascular disturbances and in addition often had abnormally profuse menstruation. Both boys and girls were of nervous high-strung temperament and in general exhibited the signs of vasomotor instability even at this early age. This is a tremendously important observation, particularly because it indicates to us a possible prophylactic therapy in these vascular families.

Paradoxically, then, hypertensive disease has a non-hypertensive stage starting usually at birth. (It is indicated on the left of the chart by the broken line.) Theoretically, this stage is characterized by the reactions of an abnormally responsive vasomotor system which gives rise to

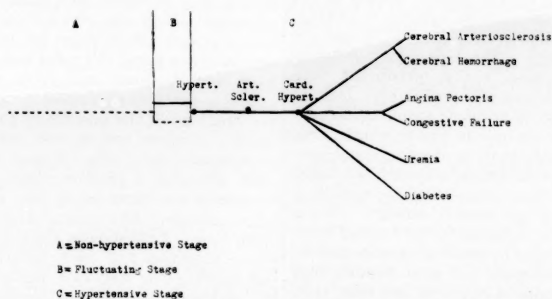
\*Read at the meeting of the Vermont Medical Society held in Burlington, Vt., on October 14, 1926.

†From the Medical Clinic of the Peter Bent Brigham Hospital.

the symptoms indicated above. Sometimes many of these symptoms disappeared in early adult life to return again about 30 to 35 years when the strain of hyperactive living begins to be felt. Of the various processes that go to produce these abnormal vasomotor responses, vasoconstriction is, without much doubt, the most important. We know, furthermore, that at times vasoconstriction may be temporarily prolonged and very marked in these individuals. They are usually the very ambitious, busy brain workers

fluctuating pressure, or even earlier. Certain it is, however, that in the third stage of permanent hypertension there is definite evidence of sclerosis in the smallest arteries and arterioles. In many patients who have travelled in the course of years from non-hypertensive to hypertensive disease I have been able to observe the development of this arteriosclerosis in the retinal vessels at or about the time that permanent hypertension becomes established. Of course, sclerosis may be present in other vessels before

DEVELOPMENT OF "CARDIO-VASCULAR-RENAL" DISEASE



with great responsibilities. One can readily understand that to drive the human machine at the pace they do requires calling on the vasoconstrictor processes all too frequently. In those who eventually are to become hypertensive the resultant change occasionally may be noted at about 35 years of age. This change is one due to more frequent and lasting vasoconstrictive processes causing a slow rise in blood pressure, at first within the limits of normal. Now and again the pressure may rise above the normal line. If you are privileged to see such a patient frequently, you will find that his systolic pressure may one day be 160 mm. and the next 135 mm. Gradually the swings reach higher levels, perhaps to 175 mm., but returning again to a normal level. Such a stage of pressures, fluctuating from normal to hypertensive, may last five years or more. (It is indicated on the chart by the double line corresponding to the letter "B.") After this the patient goes on into the third stage.

From our knowledge of the life and death of cells and the effect of excessive work on cells we can readily understand that such reactions in the small blood vessels must take their toll in the walls of their cells. These undoubtedly grow old faster than they should. As a result we have the development of arteriosclerosis, not of the large peripheral vessels, but of the smaller ones. Just when this lesion first occurs, we have no real information. It is perfectly possible that the process begins in the second stage of

it can be seen in the retina. Unfortunately, however, this is almost the only place where we can make observations on small arteries during life. As a rule, they are a pretty good index of the condition of similar vessels elsewhere.

This third stage then is one of permanent hypertension. Rarely does the blood pressure fall to normal in such patients except from cardiac weakness or great relaxation of the whole vascular tree as from shock, loss of blood, drugs, etc. Now while the pressure is always above normal and while there is a tendency for the pressure to gradually rise, the maximum pressure reached varies markedly in the individual patient. Death may come from angina pectoris in a man whose systolic pressure has never been higher than 165 mm. On the other hand, a patient with a pressure of 250 mm. or even more may live in comfort for a long time. It should always be borne in mind that the pressure, especially the systolic, at any given moment is made of two component parts. One is the so-called "base line pressure" which is necessary to maintain the circulation; the other is the difference between such pressure and that actually found at the moment. This excess pressure is due to abnormal, probably harmful, vasoconstriction the result of nerve impulses, chemical toxins, etc.

We are tending to stray slightly from our main theme of the development of end stages. Almost from the beginning of the stage of permanent hypertension we can observe three fac-

tors,—hypertension, retinal arteriosclerosis and cardiac hypertrophy. This last is, of course, a natural expectation. With greater peripheral resistance the heart must enlarge. Such increase in size can be found by the ordinary methods of physical examination in over 80 per cent of all hypertensive patients. Where such means do not readily disclose hypertrophy, the so-called "7 foot" x-ray plates or electrocardiograms almost invariably discover it.

From this point (cardiac hypertrophy) the course of the vascular disease in a given patient may follow along any one or any combination of lines indicated on the chart. Rarely is the disease confined to a single system. Usually, however, the process is more marked in one system than in others. The lesion may progress more in the cerebral vessels producing such symptoms as nervousness, irritability, lack of concentration, loss of memory, sleeplessness, etc. One might almost include in this cerebral group the closely related tinnitus, deafness and possibly the nasal hemorrhages, although the latter more often come from branches of the maxillary arteries which are not strictly cerebral. When the disease affects particularly the frontal lobes, the character changes of cerebral arteriosclerosis, the psychic disturbances and even insanity may occur. The commonest result is, however, cerebral hemorrhage or thrombosis.

If the process develops most markedly along the cardiac route one may have angina pectoris or chronic myocarditis with heart muscle failure. Not all cases of angina are hypertensive when seen, but Levine has shown that 76 per cent of his cases were hypertensive. It is highly probable that if one could have observed the early development of the other 24 per cent, many more would have shown hypertension at some time. Similarly, with regard to chronic myocarditis I firmly believe that in a very large majority of such patients in whom rheumatic valvular disease, hyperthyroidism and syphilis can be excluded, the etiology lies in hypertensive small blood vessel sclerosis. We are accumulating considerable evidence to prove this.

The vast majority of those patients who come to us with the so-called "chronic interstitial nephritis" after they have reached the age of 40 have travelled the route indicated in the chart. They are primarily vascular hypertensive cases in whom the sclerosis of small renal vessels has produced secondary degeneration and destruction of the kidneys. Rarely, indeed, in an individual beyond middle life can one attribute the nephritis to a previous acute nephritis.

When this vascular sclerosis that we have been discussing affects particularly the pancreatic vessels, diabetes ensues. Probably most of the diabetes in older people has originated in this way. Many hypertensive patients show from

time to time slight traces of glycosuria which is relatively unimportant. Years ago, using the "glucose tolerance test" on my patients with increased blood pressure, I showed that even those that had not previously shown a glycosuria often had a decreased functional ability for handling sugar. I then concluded that all hypertensive patients were potentially diabetic.

A short time ago I said that it was rare for the arterial disease to confine itself to any one system of vessels. Indeed, it is practically the rule for it to affect two or more of those systems we have just considered. The process in one system may be much more advanced than in the other and death may result from it before there is any evident disturbance in the other systems. On the other hand, the mere fact that the symptoms or signs found in a given patient point to probable death from disease of one organ should not blind us to the possibility that the vascular lesions in other organs, too, may be advanced enough to cause death. Several years ago I had been watching a patient whose chief and only complaint for three years was angina pectoris, often intense. She had a little nephritis and from time to time showed slight glycosuria. Our entire attention had been, however, centered on her heart. One day in a period of excitement she suddenly had a fatal cerebral hemorrhage. In this case you see all four systems were involved and death came from that part least expected. Many a death has been attributed wrongly to "acute uremia" merely because the patient was known to have shown hypertension and albumin and casts in the urine. Do not forget that cerebral hemorrhage can occur in the "silent areas" of the brain without paralyses. And do not forget that the diagnosis of chronic nephritis rests not alone on hypertension, albuminuria and cylindruria but requires in addition a definite permanent decrease in renal function. Remember also that in an older patient with hypertension, edema, oliguria, albuminuria and cylindruria (that is the so-called "cardio-renal" case) that the chief difficulty is with the heart and that the kidneys are probably capable of doing a fairly good job if they are given a chance. In such patients treatment should be concentrated on the heart. Forget the kidneys temporarily no matter how much albuminuria you find.

Lastly, when you have a hypertensive cardiac patient or a renal one or one with diabetes or cerebral vascular disease, think broadly about him and realize that his disease is a generalized small blood vessel sclerosis with probable secondary degenerative changes in many organs in addition to that which is most obvious. Such a realization will bring back to your memory this practical scheme of mine and will enable you with its help to understand the various combinations of signs and symptoms which sometimes



develop. Such an understanding will undoubtedly lead to better prognosis and far more intelligent treatment.

Two main conclusions should be drawn from this paper. First, those practitioners among you who have vascular families in your clientele should appreciate the importance of heredity in the production of these various vascular diseases and should grasp at the opportunity to practice a little preventive medicine. The parents in such families should be urged to bear in mind the possible future of their children and guide them into and along channels not characterized by great mental strain, excessive ambition, etc.

The second conclusion to be drawn is that every case that comes to you with hypertension deserves very careful study and not mere casual treatment of the presenting ailment. A careful history should be taken with the object of eliciting symptoms of cerebral, vascular, cardiac and

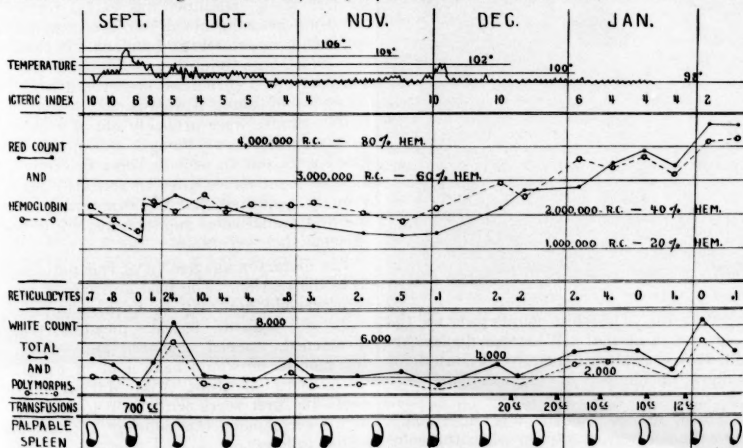
renal disease. Physical examination should be done with the object of determining how much damage can be found in all parts of this system. Special attention should be given to the eye grounds, particularly the character of the retinal vessels. Urine examination should not be confined to a mere test for albumin and sugar but should include particularly the sediment. A single observation is not enough. Finally, one should determine the renal function by some of the various tests because our present knowledge indicates that no case showing hypertension, albuminuria and cylindruria should be called chronic nephritis until there is a definite persistent fall in renal function. If you put your patient through such routine measures and then superimpose on this chart of mine the results found, I am very sure that you will be in a better position to make accurate prognoses and give the most intelligent treatment.

### AN UNUSUAL CASE OF PERNICIOUS ANAEMIA

BY DWIGHT O'HARA, M.D., AND J. S. GREWAL, M.D.

In the fall of 1925 two patients with pernicious anaemia were discharged from the Waltham Hospital; a fourteen-year-old boy in the pink of remission, and a woman of forty-five who was advised to take an opportunity which presented itself to go south for the winter. To neither of these patients was the suggestion made that a little liver might be of value, and yet

history will be interesting.<sup>71</sup> On the thirteenth of September, 1926, one of us was called to see the boy, now aged sixteen, because he had fainted. None had noticed that he was pale or weak. He had been working as an automobile mechanic, and until he fainted neither he nor his family had thought much about his physical condition. He had been well and able to work all summer.



they were both quite pleased with their treatment. *Vanity of vanities*, so were we.

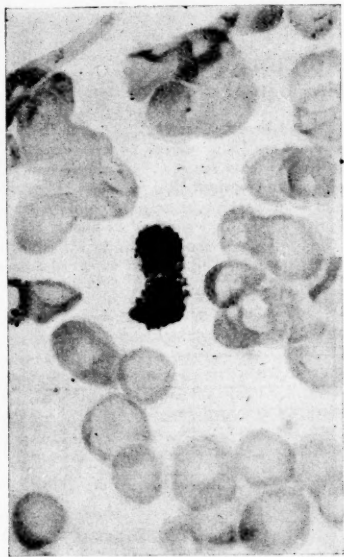
In summing up an account of the first case a member of the staff said: "If this case was an example of pernicious anaemia in a fourteen-year-old boy, it is extremely rare, and deserves recording for this reason alone. Its subsequent

He had continued to live, as always, on white foods such as bread, milk, potatoes, candy (provided it was not colored), etc. He never ate green vegetables or meat of any kind. Arrangements were immediately made for his return to the Waltham Hospital.

On the accompanying chart are shown the

main clinical and laboratory findings during the subsequent five months. In addition to these data a study of the gastric contents and the bone marrow was made by Dr. W. B. Castle. Achylia gastrica was present, and the bone marrow of the tibia was cellular, showing the megaloblastic hyperplasia which Dr. F. W. Peabody has found to be characteristic of adult cases of pernicious anaemia in a relapse<sup>2</sup>.

As during his previous relapse, the patient again showed an ashy pallor, and there was at no time any suggestion of jaundice. As shown on the chart, the icteric index was always within normal limits, 12 being the upper normal on the scale used. The red counts and hemoglobin readings are so charted that when the hemoglobin line is above that of the red count, the color index is greater than 1.0, and when below,



it is less than 1.0. The white counts were for the most part below normal. Whatever fluctuation they did show was almost entirely accounted for by changes in number of polymorphonuclear cells.

The study of the smears was interesting. There was much achromia, even when the color index was high. The platelets were always diminished and frequently absent. The percentage of reticulated cells was most often normal or less than normal. About a week after the large transfusion, however, there appeared a storm of reticulated red cells—twenty-four per cent. In one of the smears taken at this time a nucleated

red cell in mitosis was found. This was one of only four nucleated red cells seen in the many smears examined. It is shown in the accompanying photograph, kindly taken by Miss Lillian Leavitt. In the negatives it is interesting to note that Miss Leavitt was able to bring out stippling of the red cells which could not be seen by ordinary microscopic observation.

An attempt has been made on the chart to show the approximate size of the spleen. Last year it was noticed that the spleen began to become softer and smaller before other clinical evidences of improvement appeared. This year the spleen became larger during the first two weeks of observation—a period in which the patient was becoming rapidly weaker and sicker. After the transfusion it became smaller, but very soon increased in size to such an extent that we could almost feel the notch, and again the patient became sicker. Lastly, a smaller and softer spleen heralded the eventual recovery. In this patient, then, an enlarging spleen has twice been an omen of relapse, and a shrinking spleen has three times been an early sign of improvement. The usual interpretation of the enlarged spleen—that it is an index of blood destruction—was not borne out by other indications of hemolysis. In fact, with low color index, lack of jaundice, decreased platelets and polymorphonuclear leucocytes, the case seemed to suggest at all times aplasia of the marrow as the fundamental mechanism of the anaemia.

The first transfusion of 700 cc. of whole blood, by Dr. H. Q. Gallupe, was called for by the rapidly decreasing blood values accompanied by epistaxis, hematemesis and melena. It tided over the crisis, and doubtless stimulated the little storm of blood formation observed a week later. A series of small transfusions, given in the fourth month, were probably not of great value. In giving these our thought was not to supply blood cells, but to provide some theoretical hormone-like substance in small repeated doses. We vaguely suspected that the stimulating effect of the first transfusion might indicate a deficiency of some such substance.

The dietary management of this patient drove us to distraction. The food antipathies of a sixteen-year-old boy may be unsurmountable. In vain we coaxed, teased, pleaded, reasoned, threatened, warned, menaced and swore. For two months he would have none of us with our liver. Our dietitian, Miss Marian Haywood, made the first score with liver ice cream. We highly recommend this delicacy, the formula for which follows:

Cream	240 CC.
Sugar	15 G.
Cocoa	15 G.
Speck of salt.	

Mix as for ice cream, then add 45 G. ground liver and freeze.

We believe the data now recorded justifies the

diagnosis of pernicious anaemia. The onset at the age of fourteen is remarkable. While the first relapse in this case lasted for six weeks, the second one persisted for approximately twelve weeks. During the first relapse no liver was fed to the patient, and during the second only a very small amount was eaten. At the present

time the amount of liver in this patient's diet is known to be inadequate, and a third relapse is anticipated in the near future.

REFERENCES

- 1 O'Hara: Three Months on a Medical Service. Boston Med. and Surg. Jour., 194, 8, pp. 337-349, Feb. 25, 1926.
- 2 To be published shortly.

RECURRENT POST-OPERATIVE OBSTRUCTION—REPORT OF TWO CASES

BY EDMUND F. CURRY, M.D.

To some of us who are doing surgery, there appears to be either a lack of appreciation of the importance of the signs and symptoms of post-operative obstruction, or a mental attitude which refuses to admit their importance—"verily these things shall not be visited unto us"—due perhaps, to a natural reluctance to explain the necessity of reoperation on one's patient.

With this reluctance to operate, there seems to be a willingness to procrastinate, and by the use of enemata, cathartics and opiates, to take a position of watchful waiting. This is unfortunate for the patient, as a patient with symptoms apparently not serious for a period of 48 or 72 hours may suddenly become toxic and beyond the help of surgical interference.

Dr. Moynihan speaks of this condition as "one of the gravest and most disastrous of emergencies." Dr. Charles Mayo says, "I have not seen death occur as the result of unnecessary exploration. I have seen many patients saved and some die of disease, but many die solely because exploration was done too late." Dr. Maurice Richardson said, "Surgical intervention is indicated whenever an acute intestinal obstruction is suspected. When the nature of the lesion is beyond doubt, the favorable period of intervention has usually passed." Dr. Finney is quoted as saying that he had rather be operated on for intestinal obstruction by a poor surgeon early, than by a good surgeon late.

It has been the writer's fortune to have had several cases of post-operative obstruction where early operation has given a happy outcome. It has also been his fortune to listen to the report of several cases where the obvious symptoms were not appreciated and the outcome was not so favorable.

With these instances in mind, it seems worth while to report the following two cases as examples of what may be done for this complication, or as examples of what some patients will stand.

CASE I. H. S., age 10. December 5, 1925, the patient was operated on by the writer for acute appendicitis of two days' duration. A right rectus incision was made. On opening the peritoneum, foul seropurulent fluid escaped. The perforated appendix was located and removed. A rubber tissue drain was inserted.

The patient did well for five days, but then had cramps in the upper abdomen, during which the child

screamed with pain. During the colic there was vomiting and visible and palpable peristalsis.

A second operation was performed December 10, 1925. A high left rectus incision was made. On opening the peritoneum there was much clear serous fluid. The presenting small bowel was distended and injected. A jejunostomy, Witzel method, was performed. No attempt was made to free the adhesions causing obstruction, on account of drainage and fear of causing general peritonitis. The patient did well for seven days, at which time the tube came out, and as there had been no drainage for two days before its release, it was not replaced. Colic and vomiting returned and continued with increasing frequency for two days, when a third operation was done December 19, 1925. The abdomen was opened by a low left rectus incision. On opening the peritoneum much clear fluid escaped as in the previous operation. Obstruction was found at the site of the original operation. A distended proximal and collapsed distal bowel was found at this point. The adhesions were freed, after which the intestinal contents passed freely into the collapsed bowel. Although there was considerable oozing of blood, the abdomen was closed without drainage. The patient made an uneventful convalescence and was discharged to his home January 6, 1926.

Two weeks after discharge, he reentered the hospital with a history of obstruction of two days' duration. The patient was toxic and dehydrated, suffering acute paroxysmal abdominal pain with gurgling and amphoric peristalsis. A fourth operation was done January 20, 1926. A midline incision was made. On opening the peritoneum much free fluid escaped as in the previous operations. Obstruction was again seen at the site of the original operation, the adhesions causing acute angulation. The adhesions were freed with considerable difficulty, after which the intestinal contents passed freely by this area. The wound was closed without drain. The patient made an uneventful recovery and has been well to date.

CASE II. L. S., age 23. On August 2, 1926, the patient was operated on by another surgeon for chronic pelvic inflammation. No drain was inserted. Following the operation, the patient had more or less continuous vomiting and elevation of temperature. At the end of two weeks, August 16, 1926, she was reoperated on by the same surgeon and the pelvis drained with a stiff rubber tube. No improvement followed the second operation. The family was informed that the patient had general peritonitis and nothing further could be done. A change was made in attendance and the patient was seen by the writer five days after the second operation. The temperature was 105, the pulse 140. The patient was toxic; there was continuous vomiting, severe pains in the upper abdomen and amphoric peristalsis. A diagnosis of mechanical obstruction was made. A third operation was performed August 21, 1926. A high left rectus incision was made. On opening the peritoneum much clear serous fluid was seen. A distended and injected small bowel was presented. A

jejunostomy by the Witzel method was performed. On the following day a small loop of bowel protruded from the original incision, making another operation imperative. A fourth operation was done August 22, 1926. The loop of bowel was cleaned, freed and replaced in the abdominal cavity. The loop was subcutaneous through the whole length of the original incision, the deeper layers of which had separated. When the loop was replaced in the abdominal cavity it was decided to attempt to free the obstruction. This was found to be at the site of the original operation in the pelvis. The obstruction was freed with

considerable difficulty. The wound was closed with through and through silk-worm-gut sutures and a cigarette drain inserted. The patient was in very poor condition after the operation. Eight ounces of 5% salt solution were given every six hours through the jejunostomy tube in an attempt to replace the loss of chlorides and to combat toxæmia.

The patient developed a small faecal fistula at the upper angle of the original incision four days after the last operation. This closed spontaneously thirteen days later and the patient was discharged to her home September 21, 1926. She has been well to date.

## CARDINAL PRINCIPLES OF CARDIAC DIAGNOSIS\*

BY WILLIAM D. REID, M.D.

HEART disease has ranked first in the mortality statistics of this country during the past few years. Accuracy in its diagnosis is, therefore, highly desirable. It is common experience, nevertheless, for those of us conducting cardiac clinics to find that in as many as one-third of the cases sent in, we are unable to confirm the diagnosis of heart disease. Sir Thomas Lewis<sup>1</sup> goes even further in stating that three-quarters of the cases today diagnosed as cardiac are not cardiac.

New light on affections of the heart may be said to have come by leaps and bounds during the past decade or so, and this has compelled a considerable recasting of our conceptions of these lesions. It is felt, therefore, that a brief review of some of the more important data pertaining to cardiac diagnosis may prove helpful to those whose work has not enabled them to keep up to date on these matters.

### THE RULE OF AGE

It is a good rule to resist the diagnosis of heart disease in patients under forty years of age unless one or more of the chief reliable signs are present; in the elderly, the contrary is true.

### THE CHIEF RELIABLE SIGNS

The chief reliable signs of heart disease are as follows:

1. Distinct over-distension of the veins of the neck.
2. A precordial thrill, if a definite "purr"; a slight vibration is insufficient.
3. An unmistakable pericardial friction rub.
4. A diastolic murmur at the apex or base. (Exceptions rare.)
5. An irregular rhythm, persisting after exercise, especially if the rate is, or reaches, 120 or higher.
6. *Definite* signs of enlargement of the heart.
7. *Expansile* pulsation of the liver.
8. Widespread arterial disease, or a *persistent* blood pressure of 160 or above in a young individual, or of 180 or higher in the elderly.

Some of these will bear a brief comment.

Well-marked vascular phenomena of aortic insufficiency are almost as diagnostic as the diastolic murmur at the base. This is particularly true if on pressure on the artery a diastolic murmur (the Durosiez sign) is heard in addition to the systolic; the latter may be elicited in many normal individuals. The Traube sign, i. e., the doubled first sound audible without pressure over the large arteries, is a valuable but unfortunately a rare finding.

In the determination of cardiac enlargement palpation of the character and location of the apex apical impulse is more valuable than the results of percussion. Care must be taken to exclude displacement of the cardiac impulse by ptosis of the heart or extra-cardiac pathology, such as pleural effusion, abdominal tumor, spinal curvature, etc. A comparison<sup>2</sup> of clinical signs with postmortem findings shows that moderate degrees of cardiac enlargement are not detected with accuracy by our bedside methods; in doubtful cases resort to roentgen mensuration is most helpful.

In irregular hearts, if the rate is 120 or higher (the faster the more certain the diagnosis), or can be accelerated to this rate, *while the rhythm remains irregular*, fibrillation of the auricles is almost certainly present. This is sometimes termed "the rule of rate" and is of distinct value in the differential diagnosis of the cardiac arrhythmias. Attention is drawn to the fact that because of the frequency of a pulse deficit (some of the beats not being represented in the peripheral pulse) these observations must be based upon auscultation of the precordia rather than by palpation of the peripheral pulse.

In irregular rhythms, if there is a constant quickening of the heart rate during deep inspiration, auricular fibrillation is not present. If four or more of the heart beats are absolutely regular in time and force (a criterion of dominant rhythm), or, in other words, if the irregularity is not absolute, auricular fibrillation should not be diagnosed.

A diastolic rumble, or, as many prefer to term it, a diastolic murmur and a diastolic thrill at the apex are the two best signs of mitral sten-

\*From the Evans Memorial, and the Department of Medicine, Boston University School of Medicine.



osis. The murmur is of low pitch, audible over the maximum impulse, and often detected only when the patient is in the recumbent posture. This murmur can be noted to start at the time of opening of the mitral valve which is just after the second heart sound. Its name "middiastolic" is not entirely accurate.

As stated above, a thrill is a reliable sign of structural change in the heart only if it is a definite "purr"; in such cases, however, it will be found that other unmistakable signs are present and the thrill is not necessary to establish the diagnosis of heart disease. I have never found a thrill to be of value in a *doubtful* case of heart disease.

Pulsation of the liver is evidence of heart failure (i. e., broken compensation) of an advanced degree. Care must be taken to establish that the pulsation is truly expansile and not merely a forward thrust imparted to the liver by the underlying aorta. True pulsation of the liver is relatively uncommon but will be detected more frequently if the sign is properly sought for in conditions of marked stasis of the circulation.

It should be noted that a presystolic murmur is not included in the list of the chief reliable signs of heart disease. A true presystolic murmur is rare and there is a difference of opinion<sup>2</sup> about the crescendo murmur of early ventricular systole which is often held incorrectly to be presystolic. Such a murmur may be pre-sound but not necessarily presystolic.

#### MINIMAL SYMPTOMS AND SIGNS

Angina pectoris is a set of symptoms, or clinical syndrome, which must often be diagnosed in the absence of any physical signs of structural change in the heart. Pain under the sternum with typical radiation to the shoulders, back, or arms, especially if present in attacks and closely associated with exertion, must never be treated too lightly. If physical signs be present, they are not due to angina pectoris but to the heart disease with which the anginal syndrome is associated. Angina pectoris is, perhaps, the only affection of the heart which must be diagnosed from the history or symptoms alone. The relief obtained by the rapidly acting vasodilators, such as nitroglycerine and amyl nitrite, goes far to confirm the diagnosis.

A lessened exercise tolerance is at times of considerable importance. In elderly patients, even in the absence of signs of structural change, a poor tolerance for exercise justifies the assumption that the heart is at fault until proven otherwise. In young individuals, however, without signs of definite enlargement of the heart, mitral stenosis, aortic disease, or auricular fibrillation, a deficient exercise tolerance should rarely be attributed to the heart; tuberculosis or pyogenic infections should be suspected. It should

be remembered that we as yet possess no test of cardiac efficiency that is reliable in all cases.

An electrocardiogram showing impairment of conduction between the auricles and ventricles or in the ventricular tissues, (namely, intraventricular or bundle branch block,) and small and abnormal complexes in all leads may, unless drug-induced, be considered evidence of disease of the myocardium. In some cases the electrocardiogram may disclose such findings although the heart is normal to ordinary clinical examination; suggestive symptoms are, however, rarely absent.

The appearance of a systolic murmur over the apex in febrile conditions brings up the question of the presence or absence of infection of the heart, i. e., acute endocarditis. Clinicians are constantly seeking information that will make possible a prompt and reliable decision on this problem. Thayer<sup>4</sup> feels that the diagnosis of acute endocarditis or myocarditis may be made with considerable probability in instances of chorea where the temperature rises to 101° F. or higher. Experience shows that the chances of cardiac involvement are greater in acute articular rheumatism the more often the attacks of the latter occur. In this disease an electrocardiogram showing partial heart-block indicates that the heart muscle is affected. Some would say that the presence of acute rheumatic fever or chorea is *prima facie* evidence that the heart is involved. Regardless of the truth of this from an academic standpoint, involvement of the heart to the extent that may be recognized clinically often does not occur. One may consider such cases as instances of "potential heart disease" and continue observation of the patient until the status of the heart is clear. While it is natural to desire some means of determining at an early stage and with certainty when the heart has become infected it does not appear that we have yet the means of doing so, and furthermore, the matter loses some of its importance when it is realized that such cases must always be kept under treatment and at a subsequent date a much more reliable diagnosis of the condition of the heart can usually be made.

Septic heart disease, perhaps better known as subacute bacterial endocarditis or under other names, may appear in the so-called silent form in which a heart murmur is absent. At times attention is first called to the heart by the results of emboli, such as the sudden appearance of blindness, hemiplegia, aphasia, acute abdominal or pulmonary symptoms, hematuria, petechiae, etc. Fever of irregular type, anemia, palpable spleen, painful and often swollen joints, and certain skin eruptions may be present. A positive blood culture, usually the streptococcus viridans, is perhaps, the most important diagnostic sign. Subacute bacterial endocarditis as a rule is superimposed upon a preëxisting heart affection, such as chronic rheumatic heart disease,

and the physical signs of this are usually present. Though most often cardiac murmurs are present, in those cases in which they are absent the diagnosis must be made from the observation of a sufficient number of these symptoms and signs, and the exclusion of other diagnoses.

#### UNRELIABLE SYMPTOMS AND SIGNS

There are many symptoms and signs which may be classed as unreliable; though often present with organic cardiac disease they are so frequently associated with a heart that is normal, as proven by the subsequent course and at times by postmortem examination, that they may properly be termed unreliable evidence of heart disease. Some of these are: palpitation, submammary pain, some degree of shortness of breath, dizziness, fainting, exhaustion, fatigue in the legs, etc.; the normal protodiastolic gallop—third sound—in the young, the unimportant systolic murmur in the pulmonic area, the frequent systolic murmurs at the apex in the recumbent and left lateral postures, the loud cardiorespiratory, inspiratory murmur, so often heard around into the back, respiratory arrhythmia, extrasystolic arrhythmia in the absence of other signs of cardiac abnormality, tachycardia of moderate degree and of inconstant rate, so-called "weak sounds," crescendo quality of the first sound, split first sound, reduplicated second sound, accentuated pulmonic second sound, slight thrills, and cold, clammy hands. May we repeat that the above symptoms and signs are not of themselves reliable evidence of heart disease; it would carry us too far afield to discuss them further in this paper.

#### THE ETIOLOGIC TYPE OF HEART DISEASE

In instances where the presence of heart disease has been established it is highly desirable to carry the diagnosis further and determine the type—the type in which the etiology is expressed as far as it is known. Today heart affections are considered from the standpoint of (1) the causation, (2) the structural change, and (3) the function. An outline of this so-called triple method of classification of data pertaining to the heart is as follows:

##### I. Types of Heart Disease (Etiologic).

1. Rheumatic heart disease.
2. Septic heart disease.
3. Cardiovascular syphilis.
4. Senescent heart disease.
5. Hypertensive heart disease.
6. The heart in hyperthyroidism.
7. The heart in diphtheria.
8. Congenital heart disease.
9. Effort syndrome: irritable heart (not true heart disease).
10. Rare conditions. (Tumors, rare infections, etc.)

##### II. Structural Lesions.

1. Endocardial.
  - a. Insufficiency or stenosis (or both) of one or more valves.
  - b. Intracardiac thrombi.

##### 2. Myocardial.

- a. Myocarditis.
- b. Enlargement (includes hypertrophy and dilation).
- c. Axis deviation (ventricular preponderance).
- d. Septal defects (congenital).

##### 3. Pericardial.

- a. Acute fibrinous pericarditis.
- b. Pericardial effusion.
  - (1) Serofibrinous.
  - (2) Purulent.
  - (3) Hydropericardium.
- c. Adhesive pericarditis (including the obliterative form).
- d. Pneumopericardium and other rare forms.

##### 4. Position of heart.

- a. Congenital dextrocardia.
- b. Acquired dextrocardia.

##### 5. Great vessels.

- a. Aorta.
  - (1) Dilatation.
  - (2) Aneurism.
  - (3) Aortitis.
  - (4) Congenital changes (coarctation, transposition with pulmonary artery, etc.).
- b. Patent ductus arteriosus.

#### III. The Functional Conditions.

##### 1. Heart failure ("broken compensation").

- a. Congestive type.
- b. Angina pectoris.

##### 2. The arrhythmias, or disordered heart action.

- a. Sinus arrhythmia.
- b. Sino-auricular block.
- c. Atrio-ventricular rhythm and ventricular escape.
- d. Premature beats (extrasystoles).
  - (1) Auricular.
  - (2) Ventricular.
  - (3) Nodal.
  - (4) Interpolated.
- e. Paroxysmal tachycardia.
  - (1) Auricular.
  - (2) Ventricular.
  - (3) Nodal.
- f. Auricular flutter.
- g. Auricular fibrillation.
- h. Ventricular fibrillation.
- i. Heart-block.
  - (1) Auriculo-ventricular.
  - (2) Intraventricular (bundle-branch).
- j. Pulsus alternans.

##### 3. Ability to work.

- a. Able to carry on the patient's usual activities.
- b. Able to carry on slightly to moderately curtailed activity.
- c. Able to carry on only greatly diminished activity.
- d. Unable to carry on any activity (without distress).

A heart diagnosis is not complete until items from all three of the above columns are considered. Examples: 1. Rheumatic heart disease (inactive), mitral stenosis and regurgitation, auricular fibrillation (able to carry on only greatly diminished activity). 2. Hypertensive heart disease, cardiac enlargement, pulsus alternans (unable to carry on any activity).

The above arrangement of the data pertaining to cardiac diagnosis, for which no claim of

originality is made, is perhaps the essential feature of my book<sup>5</sup>—the three major sections of which discuss the Type of Heart Disease, Functional Conditions, and Structural or Anatomical Lesions. This method of classification of cardiac affections has recently gained much support by the publication of one very similar<sup>6</sup>, having the endorsement of the American Heart Association.

The value of this method of classification in cardiac diagnosis may be maintained on three grounds. First, it emphasizes the cause of the heart disease and so indicates the need for etiologic therapy, as that of syphilis in cardiovascular syphilis, etc. Second, in prognosis it is helpful in that our knowledge of cardiac pathology and its tendency to progression or healing is vitally concerned with a recognition of the nature of the agent or conditions affecting the heart. And finally, the etiologic diagnosis is essential to any effective work on the prevention of heart disease.

It is believed that the statement can be sustained that the diagnosis of cardiac disease according to the etiologic type is not less accurate, nor essentially more difficult, than the older system based upon the structural changes or anatomical lesions.

#### MYOCARDITIS

"When in doubt call it myocarditis." Such would seem to be the reasoning used in many instances in which this diagnosis is made. As commonly used, it may fairly be termed a "wastebasket diagnosis." I am unacquainted with any reliable criteria upon which to base myocarditis as a complete-clinical diagnosis. Experience<sup>7</sup> shows that this diagnosis should be made only after a careful study of the case and then there should be added, preferably in writing, "of undetermined origin." Such action will cause a sense of incompleteness and stimulate further study, as a result of which a more accurate diagnosis will often be achieved. Those using the etiologic diagnosis described above will

not be satisfied with a diagnosis solely of "myocarditis."

#### SUMMARY

*The rule of age.* The diagnosis of heart disease in patients under forty years is rarely justifiable in the absence of one or more of the chief reliable signs; in the elderly the contrary is true.

*Chief reliable signs.* A list of these has been given in the text.

*Minimal symptoms and signs.* A diagnosis of heart disease is indicated at times in spite of the lack of any of the above mentioned reliable signs. This applies to angina pectoris, certain electrocardiograms, septic heart disease (subacute bacterial endocarditis), and a diminished exercise tolerance in elderly patients.

*Unreliable symptoms and signs.* Practically all symptoms and signs not mentioned above, though often associated with organic disease of the heart, are so frequently present with the normal heart that they are not of themselves reliable evidence of cardiac disease.

Having determined the presence of heart disease, it is necessary to carry the diagnosis further to the recognition of the type,—in which the etiology is expressed as far as is known. (Such a classification is given.)

There are no reliable criteria on which to base "myocarditis" as a complete clinical diagnosis.

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## A CASE OF AN ADRENAL ADENOMA

BY JOSEPH MERRIAM, M.D., AND LAWRENCE W. SMITH, M.D.

THE following case, with the discussion of the pathological findings, seems to present features of sufficient interest to warrant reporting it.

The patient was a married negress of twenty-four years of age, whose occupation was general housemaid. She was seen on December 18, 1925, and complained of having had a "lump" in her abdomen for two years.

Her past history was essentially unimportant. Catamenia began when she was sixteen years old, and was regular for two years, then became somewhat irregular and of diminishing length and amount, and was accompanied by some pain. She had one pregnancy about three years ago, which was terminated in a high forceps delivery.

Since the birth of her child the patient was more irregular in menstruation than formerly, and began to have occasional attacks of abdominal discomfort accompanied by considerable distention, but she never had any acute illness, severe pain, vomiting or fever.

Nearly two years ago, she noticed an asymmetry of her abdomen, and investigation at that time, she stated, revealed a lump in the left upper quadrant which has been present ever since, but which she says has varied somewhat from time to time in size. It gave her the sensation of something "moving about in her abdomen." She also had occasional "burning sensations" in the region of "the lump."

The patient was a well developed, muscular negress, and, excepting for the above mentioned symptoms, was in excellent health. The examination of eyes, throat, head, lungs, heart, pelvis and extremities was

negative. Her abdomen presented a distinctly visible asymmetry which was due to a mass in the left upper quadrant. This mass was about the size of a grape-fruit, and was round, hard, smooth, nontender, and rather freely movable. It was about in the region of the spleen but could be pushed easily to the right of the mid-line and well down toward the right or left iliac fossa. The splenic dullness was apparently present while the tumor was pushed down. There was no connection by bi-manual examination with the uterus. The blood pressure was 130/80. The urine and blood were negative. X-ray examination showed the shadow of the right kidney distinctly and in normal position, but the shadow of the left kidney was indistinct.

Several conditions were considered in diagnosis and of these the following were thought to be the most probable:

1. Ovarian cyst with a long pedicle.
2. Polycystic kidney.

She was admitted to the hospital on December 29, 1925, for an exploratory laparotomy, which was done December 30, 1925.

#### OPERATION

Surgeon: Dr. James S. Stone.  
Anaesthesia: Ether.

A mid-line incision was made and extended upwards to the left of the umbilicus. The tumor was found to be retroperitoneal, and apparently connected to the left kidney. It was cystic in nature and completely encapsulated. The peritoneal coats were separated and peeled back and the cyst delivered. It was found to arise from a small kidney and the pedicle extended down into the kidney substance. The entire cyst was removed by separating it from the kidney, which then lay open from end to end. This was held to prevent bleeding and sutured together with chromic gut. The peritoneal coats were then folded in and held with a purse string cat-gut suture. The abdomen was closed in layers with chromic gut without drainage.

The patient made an uneventful recovery from operation, and her convalescence was in every way normal. She was discharged from the hospital in good condition on January 16, 1926, and returned to work on February 1, and has been in perfect health since.

The patient had this tumor for many months and there had been no great change in symptoms from the time when it was first noticed. It was not increasing in size, and, beyond giving a few transient mechanical symptoms, in no way affected the patient's general health. The diagnosis presented many possibilities. The tumor lay in a position to suggest at first an enlarged spleen, but it was rather too rounded and was accompanied by no general symptoms, no blood changes, and was independent apparently of normal splenic dullness. The unchanging symptoms and menstrual history were consistent with ovarian cyst, and the character of the tumor on palpation was very suggestive of this, but except when pushed down, it was an upper abdominal tumor and consequently from this point of view not as suggestive. The X-ray and the location both suggested polycystic kidney, but it was distinctly superficial by palpation and felt much more as though it were intra-abdominal rather than retroperitoneal. The clinical picture, which on the whole was not consistent with

any of the common abdominal tumors, becomes particularly interesting in consideration of the unusual type of tumor which the pathological examination revealed it to be.

#### PATHOLOGICAL REPORT

The pathological specimen consists of an almost spherical tumor measuring 12 cm. in diameter. This has a perfectly definite connective tissue capsule, to one side of which is adherent a small fragment of kidney tissue. The tumor is fluctuant; on incision it presents a multiloculated appearance. These cystic areas are very irregular in outline, tending to be somewhat elongated rather than spherical, and differ greatly in their contents. Some of them are filled with almost clear serous fluid, others contain a rather grumous material which appears necrotic and yellowish in color. Other areas are filled with hemorrhagic material which varies considerably in color, suggesting different degrees of change of the hemoglobin to the simpler blood pigments. Some of the areas



FIGURE 1. Photograph of gross specimen. Cross section. Note the cystic appearance of the tumor, resembling a multiloculated cystic tumor of the ovary.

are much more solid in consistency and are made up of a definite tissue which has a delicate connective tissue stroma and is distinctly yellow in color. These areas suggest the possibility of an adrenal origin for the tumor, but they are so few in number and so small in size that this possibility seems very slight. The general appearance of the tumor would suggest an atypical developmental lesion similar to the congenital cystic kidneys, but apparently restricted to a single group of embryological tubular structures. From its gross appearance, one might expect to find almost any type of renal epithelium. The gross appearance of the specimen, however, suggests definitely a benign type of tumor.

*Microscopic Examination*—The sections from different portions of the tumor all show the same general structure. The tumor apparently represents one of those adrenal adenomas which is undergoing extensive necrosis, hemorrhage, and cystic degeneration. It is definitely encapsulated, as seen under the microscope. The various cystic areas show no tendency to be lined by epithelium of renal origin, but the walls rather are composed of connective tissue, which



in places is flattened and compressed enough to give a relatively smooth surface. The cells are characteristic in appearance where they are found in the solid portions of the tumor. They are large, polyhedral in form, and present the typical vacuolization of adrenal cortical epithelium. They are arranged in massive sheets and trabeculae, with here and there some tendency toward cord formation as seen in the adrenal. A few areas are found where a suggestion of alveolar arrangement is noted, although no definite

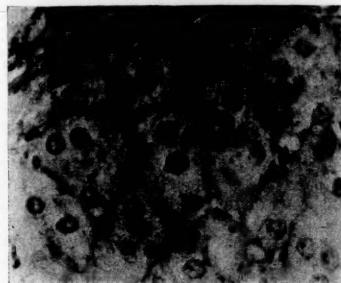


FIGURE 2. Low power photomicrograph. Leitz 16 mm. objective, No. 2 ocular. Section includes portion of capsule and atrophic kidney tissue. Shows the typical arrangement of the cells in massive sheets with little or no tendency toward lumen formation or papillary proliferation.

FIGURE 3. High power. Leitz 4 mm. objective, No. 4 ocular. Illustrates the typical morphology: large cells with foamy, finely vacuolated cytoplasm and characteristic nuclei.

lumina are seen. There is a delicate connective tissue stroma which heightens this alveolar appearance in portions of the specimen. The tumor corresponds to one of the simple adrenal adenomata of a relatively benign type which tend to remain localized, and which relatively infrequently metastasize. The prognosis in such a case should be excellent.

*Diagnosis*—Adrenal adenoma.

#### DISCUSSION

Tumors of adrenal rest origin are relatively common in the literature since the original publication in 1883 by Grawitz of a group of these tumors. Since that time, however, it has become increasingly evident that a great many of the tumors which we thought to be of adrenal cell origin were more properly included under the renal adenocarcinoma of one or another type. Accordingly, the number of true adrenal tumors is very much less numerous than supposed. Of

this group, the adrenal adenoma is one of the less frequently found. This particular case seems to offer little difficulty of classification. It presents the anatomical features commonly attributed to Grawitz tumors, of being a large well circumscribed tumor, prone to hemorrhage, necrosis, and cyst formation, and being of a yellowish color. The fibrous stroma of the tumor suggesting the central core was even present in this case, although somewhat obscured by the marked cystic degeneration of the parenchyma.

The structure of the cells offers very little opportunity for dispute. They present the characteristic features of a foamy granular cytoplasm which is finely vacuolated and filled with lipid substances. Another diagnostic feature is the fact that there is no tendency toward papillary proliferation of the epithelium. This is one of the strong arguments advanced by Stoerk, as a differential feature in distinguishing the adrenal from the renal tumors. Similarly, the relative lack of true alveolar formation and lumina, is strong additional evidence of its adrenal origin as being unlike the renal tumors, in which the epithelial cells frequently simulate those of adrenal origin, but in which the development of lumina is prominent.

#### SUMMARY

A case of adrenal adenoma presenting somewhat unusual symptomatology and pathological features is presented, with a brief discussion of the theoretical differential diagnosis, both clinically and pathologically.

#### STUDYING MOSQUITO CONTROL

*Science* reports that Colonel S. P. James, M.D., of England, and Professor N. H. Swellengrebel, of Holland, interchange observers of the Malaria Commission of the Health Secretariat of the League of Nations, are visiting the United States to inspect mosquito eradication and control methods. Accompanying them in their visit to the southern areas of the United States is Colonel F. F. Russell, U. S. Army, retired. Colonel Russell is now affiliated with the International Health Board.

The United States, according to Surgeon General Cumming, is recognized as the country foremost in developing malaria control measures, one of the latest methods employed by the Public Health Service being the use of airplanes in spraying a potent mixture of Paris green over marshy areas that are breeding grounds for mosquitoes.

Colonel James and Professor Swellengrebel expect to introduce practical methods into European countries, and will endeavor to advise health authorities in this country on the procedures employed in Europe.

**Case Records  
of the  
Massachusetts General Hospital**

ANTE-MORTEM AND POST-MORTEM RECORDS AS USED IN  
WEEKLY CLINICO-PATHOLOGICAL EXERCISES

EDITED BY R. C. CABOT, M.D.

F. M. PAINTER, A.B., ASSISTANT EDITOR

**CASE 13301**

**CHRONIC FEVER WITHOUT LOCAL  
SYMPTOMS**

**MEDICAL DEPARTMENT**

A married Scotch-American woman of twenty-six entered February 7 complaining of dyspnea, palpitation, precordial pain, fatigue and weakness, all severe for the past four and a half months.

Until thirteen years before admission she was in excellent health. Then she had an attack of scarlet fever followed by rheumatic fever which kept her in bed most of the time for four months. For the next three years she had dyspnea on moderate exertion and was treated in a hospital out-patient department about once in two weeks. She came to the Massachusetts General Hospital Out-Patient Clinic once nine years before admission, complaining of vomiting, fever, sore throat and chills. Examination at that time showed the tonsils swollen, a membranous patch on the right tonsil, heart borders 10.5 centimeters to the left, 4 to the right, a loud blowing systolic murmur heard all over the precordia and the back, pulmonic second sound markedly accentuated. Streptococci were found in a throat culture. A few weeks later she entered another hospital where she was treated for two months with great improvement. For the next three years she felt well and was only slightly dyspneic. Five years before admission she married and soon afterwards became pregnant. She had a stormy pregnancy. At four months she made a second visit to the Out-Patient Department of this hospital complaining of dyspnea, palpitation, rapid heart and precordial pain, also of a sudden "bilious attack" a month before admission with severe nausea and vomiting, pain over the whole abdomen, marked tenderness in the right lower quadrant and high fever. This attack lasted a day. For six weeks she had had periods of dizziness, especially when nauseated. For some months she had been constipated. Examination showed the apex impulse of the heart forcible and heaving in the fifth space 7.5 centimeters to the left of the midsternum. Rhythm regular. A rumbling apical diastolic murmur ending in a forcible first sound followed by a long systolic murmur which masked the first sound. Pulmonic second sound sharp and reduplicated. In spite of prenatal care at the Living-in-Hospital

she gave birth at home with a very hard labor lasting two days. She was exhausted for weeks and afterwards felt weak and tired even on moderate exertion. She was troubled with constipation at times. She kept quiet but did her housework and had no precordial pain or unusual rapidity. The dyspnea and weakness became more marked a year and a half before admission, when her mother died, and still worse when her brother died nine months before admission. Her catamenia had been irregular for a year. For the past few months she had had slight dizziness and blurring of vision at times. She sometimes urinated once at night. She had had occasional night sweats. For six months she had had gas attacks and for three months slight nausea. Four and a half months before admission there was a definite change. She became more dyspneic, weaker and had fever for days with a remission of a day or two. There was pain over the entire precordium, worse on moderate exertion, radiating to the left axilla, with a feeling of pressure over the heart. Her heart became rapid. She felt exhausted at times and spent most of the time in bed. Three months before admission she felt worse and went to a hospital where she remained two months. During her stay she had a severe sore throat. She left against hospital orders while she still had fever. Since leaving the hospital her symptoms had remained the same, with intermittent fever, the last feverish feeling three days before admission to the hospital. Her bowels had been very constipated. For a month or more she had had dull pain at the left of her stomach, almost constant by day, without relation to eating. For two or three weeks recently she had a large flat, very firm swelling in the palm of her right hand. At admission there were no traces of it, but she had pain in the fingertips. For the past four days she had felt well. Nine months ago she weighed 135 pounds, her best weight. It had gradually dropped to 103½.

Her mother had chronic rheumatism.

Clinical examination showed a fairly well developed and nourished, pale girl with flushed cheeks lying flat in bed in no apparent discomfort. The tongue showed several denuded areas, "geographical type." The apex of the left lung was dull to percussion in front below the clavicle. Apex impulse of the heart tremendously forcible; an impulse could be felt in each interspace on the left. Apex did not seem to shift. Definite thrill. Heart enlarged in both directions, —left border 11 centimeters, midclavicle 7.5, right border 4, supracardiac dullness 6. Loud harsh high-pitched systolic murmur at the apex transmitted everywhere, including the entire back. At the aortic area a low-pitched systolic, not transmitted. No diastolic murmur anywhere even after exercise. Blood pressure 105/65 to 115/58 to 100/55. Electrocardiogram showed normal rhythm, rate 80, intraventricular block. Abdomen tender in the left upper quad-

rant. Spleen easily palpable, tender. Vaginal examination showed the uterus retroverted. Tips of left thumb and forefinger showed petechiae. Reflexes normal.

Urine normal in amount, cloudy at 5 of 13 examinations, alkaline at 2, the slightest possible trace of albumin at 3, slightest possible trace of sugar at one, specific gravity 1.010 to 1.020, 0 to 2 red blood corpuscles at 4 sediment examinations, 1 to 10 leucocytes at 9. Renal function 40 per cent. Blood: 8,050 to 11,150 leucocytes, polynuclears 68 to 57 per cent., hemoglobin 70 to 80 per cent., reds 4,210,000 to 3,850,000, slight to moderate achromia in three smears, no other abnormalities; no endothelial phagocytes found. Wassermann negative.

T. 98.1° to 101.8° with daily afternoon rise; after February 19 not above 100.9°. P. 77 to 119. Respirations normal.

The patient complained of epigastric pain and distress somewhat relieved by soda. February 10 with the patient lying forward a low-pitched rumble was heard just inside the apex impulse occupying the second half of diastole, heard only with a bell chest piece. The patient complained a great deal that day of "gas on the stomach." The following day the presystolic was not heard in any position, and the patient felt much better. An hour after the last note Dr. White said that a diastolic murmur was very evident.

The night of February 13 the patient complained of much pain in the muscles of the left thigh. There was nothing to show for it.

She remained in practically unchanged condition for the next ten days, with no complaints until February 25, when she had aching pain with tenderness behind the lateral malleolus of the right foot.

#### DISCUSSION

BY RICHARD C. CABOT, M.D.

1. The heart is quite large for a person of her age. In the first examination we read: "Loud blowing systolic murmur" and "Pulmonic second sound markedly accentuated." That is just the sort of heart examination that people are always reordering and that may occasionally be true. But the chances are very great that if you and I had been there we would have heard something more, a middiastolic or presystolic murmur also. The murmurs that are much more significant diagnostically are not heard unless you are listening for them. I am asking myself whether this examination is complete or not.

2. In a man pain and fever would make you think a good deal more of appendicitis. You have to be much more cautious with pain and fever in a woman. It is generally something else.

3. "Pulmonic second sound sharp and reduplicated." (Second examination.) The reduplication is worth very much more diagnostically than the sharpness. The more we study hearts

the less we get out of the *strength* of second sounds. But the reduplication of second sounds, especially in this region, does help in the diagnosis of mitral stenosis, which this case suggests.

4. "She had had occasional night sweats." That is the first thing to make us wonder if this case is one of acute or a subacute endocarditis.

5. "She became more dyspneic, weaker, and had fever for days with a remission of a day or two." That again suggests acute endocarditis.

6. The pain over the precordium of course makes us think of pericarditis, which might also account for the fever and the night sweats. I do not think we have pain from acute endocarditis.

7. Pain in the fingertips always makes us think of the little emboli that come there with subacute endocarditis.

8. "Tongue showed several denuded areas, 'geographical type'." So far as I know that means nothing clinically.

9. "The left apex was dull to percussion in front below the clavicle." That may be pericarditis with effusion. It often gives dullness at that point.

10. "Apex did not seem to shift." They are looking for evidence of adherent pericardium, but that is a worthless and unreliable sign. The apex often does not seem to shift, but post mortem the heart is free; or it does shift and you often find pericarditis!

11. There was a definite thrill. What more should we have asked if we had been there?

A STUDENT: The kind and where.

Dr. CABOT: "Loud harsh high-pitched systolic murmur at the apex." That is probably where the thrill was. Thrill is generally over the loudest murmur.

I am rather surprised that there are so few leucocytes in the blood. We cannot say that there is a leucocytosis there.

12. No endothelial phagocytes were found. Why did they look for them?

A STUDENT: They are thinking of acute endocarditis.

Dr. CABOT: Yes. We have found them in this hospital more often in the blood in subacute endocarditis than in any other condition. So it has become a tradition to look for them. We generally do not find them.

13. Have we the temperature chart?

Dr. TRACY B. MALLORY: It is the picket-fence, septic type of temperature.

14. Dr. CABOT: "February 10 with the patient lying forward a low pitched rumble was heard just inside the apex impulse occupying the second half of diastole, heard only with a bell chest piece." They are going after it eagerly. It should be there. They have made the patient shift position so as to bring it out. The bell-shaped chest piece is that of the old-fashioned stethoscope. It is always the best for middiastolic and presystolic murmurs, especially presystolic, because they are lower pitched. We have worked that out with the stethophone here.

Low pitched murmurs are much more often presystolic, more than any other, and those are the ones you hear best with the bell of the stethoscope.

15. "An hour after the last note Dr. Paul D. White said that a diastolic murmur was very evident." So you see it makes considerable difference who listens. Of course diastolic is the same as presystolic when you are talking about a case like this.

#### DIFFERENTIAL DIAGNOSIS

We can make but one diagnosis. What we have is a history of rheumatic fever in a young girl, followed by increasing cardiac symptoms, with the physical signs of mitral stenosis going on for years. Then lately we have an additional set of symptoms, sweats, fever, petechiae on the fingers, with tenderness or pain, and then this pain in the thigh unexplained, but which might perfectly well go with emboli. Did you notice what is left out of the record, probably?

A STUDENT: The blood culture.

DR. CABOT: Yes. That is what we should like to know about. If it were positive and the case had come to necropsy the heart would probably show mitral stenosis, an old process, and on top of it vegetations of the acute or subacute type. It seems that this is enough to account for everything without looking elsewhere.

Did she have pericarditis? It is very possible. There is no way of proving it one way or the other. She had pain and a big heart, which often go with chronic pericarditis, and that is all we can say.

#### BLOOD CULTURES

DR. MALLORY: What is your guess as to what the blood culture showed?

STUDENT: Streptococcus. Negative. Streptococcus viridans.

DR. MALLORY: What do you think would be the most likely?

A STUDENT: Streptococcus viridans.

DR. MALLORY: What is the second?

A STUDENT: Gonococcus.

DR. MALLORY: Yes, and I think Dr. Cabot will bear me out in this statement. You expect streptococcus if the lesion is on the mitral valve. If it is on the aortic valve the odds are still on streptococcus, but the chance of gonococcus being found is much better. The patient did show streptococcus viridans cultures consistently. We had six flasks in all, taken at three different times, and never failed to recover the streptococcus viridans at any time.

DR. CABOT: Is there any additional history that shows more evidence of emboli?

DR. MALLORY: I think not. This brings it pretty well up to date.

#### DIAGNOSIS

Rheumatic heart disease, chronic. Mitral stenosis.

Subacute bacterial endocarditis.

#### CASE 13302

#### AN UNUSUAL CASE OF "VISCERAL CRISIS"

#### NEUROLOGICAL DEPARTMENT

A woman of thirty was brought to the Emergency Ward August 30. She stayed overnight in the ward. She had some fever. Next morning she was sent to the Nerve Out-Patient Department with a diagnosis of visceral crisis.

The only history was obtained in the Nerve Room. For four years she had had shooting pains in her legs at times. For a year she had had periodic attacks of vomiting lasting two weeks. During the year she had lost thirty pounds. Her feet and hands were numb. The day before admission she had difficulty in speech, was unable to say what she wanted to. There had been no sphincter disturbance. Examination showed tremor of the lips at times.

She gave a past history of scarlet fever and frequent sore throats. She had had marked scoliosis since a fall in childhood.

She was sent that day to the wards.

Clinical examination showed a much emaciated woman, semistuporous, but becoming quite violent when irritated. She was mentally confused and her speech was incoherent. The skin was dry and hot. There was a suggestion of right facial paresis. The spine showed marked left upper dorsal, right lower dorsal and left lumbar scoliosis with accompanying chest deformity. The left chest was flattened. The scapulae were angel-wing, more marked on the right. The lungs were clear and resonant. The apex impulse of the heart was felt in the fifth interspace 6 centimeters from the left of mid-sternum. The heart showed occasional extrasystoles and a loud rough middiastolic murmur over the apical area. Blood pressure 128/85. There was rather marked rigidity of the joints of the extremities. Right pupil smaller than left. Both dilated and slightly irregular. Right reacted sluggishly to light, left not at all. Accommodation not tested. Fundi normal. Biceps and triceps reflexes not well elicited owing to the patient's condition. Pronators normal and equal. Knee-jerks and ankle-jerks absent both in the ward and in the Emergency Ward. No true Babinski, although there was a suggestion in the left foot, and no true Romberg, although there was some swaying in the Emergency Ward.

Amount of urine not recorded, cloudy at all of three examinations, specific gravity 1.015 to 1.020. A catheter specimen showed diacetic acid, much acetone, sediment 2 to 5 leucocytes and 20 to 30 red blood cells per high power field. Culture from this specimen showed a slight growth of colon-like bacilli. Blood normal except for 84 per cent. polynuclears. Blood Wassermann negative.



A lumbar puncture in the Emergency Ward showed initial pressure 260, dynamics normal, fluid clear and colorless, ammonium sulphate strongly positive, alcohol positive, Wassermann negative, 72 cells, total protein 110, goldsol 0123211000.

Temperature 99° to 104°, rectal; pulse 87 to 160, respirations 20 to 40.

A medical consultant could find no pathology outside the spine.

September 1 another lumbar puncture was done. The canal was entered between the fourth and fifth lumbar vertebrae. 25 cubic centimeters of clear colorless fluid was removed, initial pressure 275, dynamics normal, 15 cells, alcohol and ammonium sulphate positive, total protein 190, goldsol 1233320000, Wassermann strongly positive, sugar 41, chlorides 644. No tubercle bacilli found in sediment.

September 2 a firm rounded mass somewhat larger than a golf ball was felt in the abdomen just to the left of the umbilicus, freely movable upward, not connected with the bladder. The neck was slightly stiff.

September 6 a third lumbar puncture gave 40 cubic centimeters of clear fluid, initial pressure 400, dynamics normal, 138 cells, alcohol and ammonium sulphate positive, total protein 138, goldsol 0123434110, Wassermann strongly positive, sugar not done, chloride 605, culture no growth.

September 8 the patient died.

#### DISCUSSION

BY CLYDE MARSHALL, M.D.

Before discussing the case and in line with the traditions of this clinic I should like to say that I am aware of one of the diagnoses made by the pathologist, but only one, and that one is practically as certain clinically as it was anatomically.

This sounds like neurosyphilis and possibly tabes.

I should like to know what that difficulty of speech was. Was it a question of dysarthria? Is it aphasia, where she is simply unable to get out the words that she wants, or is it simply confusion and incoherency?

MISS PAINTER: All that is said is that "she could not say what she wanted."

DR. MARSHALL: Everything in the physical examination would be consistent, probably, with neurosyphilis, not necessarily with tabes. She is stuporous and confused, which suggests that we may be dealing with taboparesis.

The goldsol is the first suggestion that all is not well with the diagnosis of neurosyphilis. The spinal fluid as given is not consistent with paresis. It is consistent with tabes or syphilis of meningovascular type. But to make a diagnosis of paresis we must have the whole five of

the spinal fluid tests positive. We have, with an increased cell count, increased protein, a positive Wassermann, a paretic gold curve, and a globular ring. It is practically invariable, I think, that unless we have these five we are unable to make a diagnosis of paresis. So that we shall have to look elsewhere for her condition of stupor and confusion.

Has she a meningovascular syphilis? The spinal fluid is consistent. The negative Wassermann does not trouble us much, but she is not likely to be comatose with only seventy-two cells.

In the second lumbar puncture the additional data of sugar and chlorides throws an entirely different light on the situation. It is still inconsistent with paresis, and also with syphilitic meningitis with coma, as we have only fifteen cells. The sugar is low, 41 milligrams per 100 cubic centimeters, and that can mean only one type of condition,—meningitis. It rules out other infections of the nervous system such as poliomyelitis, encephalitis, brain abscess or sinus thrombosis. All these would have a normal or high sugar. The chlorides are also low. Normal spinal fluid chloride is 720 to 750 milligrams NaCl per 100 cubic centimeters. Low chloride occurs chiefly in meningitis. It can occur in poliomyelitis, which however does not come up here, and could be otherwise ruled out by the sugar. So these two findings point toward the diagnosis of meningitis of some sort, of which no previous indications are given in the history. It is true she has had some "rigidity of the joints of the extremities." It does not mention particularly a Kernig or head retraction. But nevertheless a spinal fluid such as stated could mean meningitis of some sort and nothing else. It however leaves doubt as to whether she could have had a previous syphilitic condition.

The findings in the last lumbar puncture were essentially the same as those in the other except that the chlorides have gone lower this time, to 605. They go as low as that with practically nothing except tuberculous meningitis. A chloride of 605 is practically pathognomonic of that condition.

DR. JOSEPH C. AUB: Wouldn't you like to know what the cells are?

MISS PAINTER: The differential count is not given.

DR. MARSHALL: I think it would help us very much; but with a chloride of 605 we are nearly safe in making a diagnosis of tuberculosis. It is not entirely safe. We can get it in other types of meningitis rarely, but certainly not with a cell count of 138.

The question of syphilis has to be considered on the clinical history. She had four years of shooting pains in the legs, also of vomiting, which is suggestive of visceral crisis, which diagnosis was made in the wards. I think it is highly probable, although we have no more data than that, to assume that she did have central ner-

vous system lues. The Wassermann in the spinal fluid would suggest it, but in the presence of meningitis, and with a positive blood Wassermann, one is not absolutely safe in saying neurosyphilis; because according to Greenfield, with a meningitis and a positive blood Wassermann, the blood Wassermann may spill over into the spinal fluid and give a positive Wassermann without definite evidence of neurosyphilis. In this case we have only the blood Wassermann report, which is negative. Hence with the meager history we can only say we think she may have it.

I think we can make a diagnosis of tuberculous meningitis, most probably also tabes. The question of the heart is hardly within my field. She has a rough middiastolic murmur, with a history of fever and sore throat. Are we entitled to make a diagnosis of mitral stenosis on that?

DR. AUB: It is a very small heart.

DR. MARSHALL: The question of the golf ball inside the abdomen is entirely beyond me also. From a neurological point of view we would say tuberculous meningitis, probably neurosyphilis, and if so probably of tabetic type.

#### CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Meningitis, tuberculous.  
Pulmonary tuberculosis.

#### DR. CLYDE MARSHALL'S DIAGNOSIS

Tuberculous meningitis.  
Probable tabes.

#### ANATOMIC DIAGNOSES

##### 1. *Primary fatal lesions.*

Tuberculous meningitis.  
Tuberculosis of the lungs.  
Miliary tubercles of liver and kidney.

##### 2. *Secondary or terminal lesions.*

Central necrosis of liver.  
Tuberculous ulcers of cecum.

##### 3. *Historical landmarks.*

Scoliosis.

DR. MALLORY: One point that is not brought out very well in the physical examination, it seemed to me, was the woman's extreme emaciation. The circumference of the thigh at its greatest point was only twenty-four centimeters. The arms were so thin that a child could have encircled them with its fingers. There was also an extreme scoliosis.

The lungs showed a few quite small caseous areas, and also a few older calcified ones. The bronchial glands showed an occasional calcified spot. The heart weighed 200 grams. The meas-

urements of the valves were normal, but the mitral valve showed very definite thickening along the margins, and also some thickening of the chordae tendineae. I think sufficient to give the murmurs recorded in the history, but probably causing no symptoms, and its small size was due to the general extreme emaciation of the patient.

The liver was also very small, weighing only 850 grams. Section of the inferior surface showed numerous miliary pinkish white foci. The kidneys showed one fair sized caseous area four millimeters in diameter. The most important tuberculous focus, other than the acute terminal miliary condition, was a fairly large tuberculous ulcer of the cecum, evidently of quite long duration, as the lymph nodes immediately draining that area showed evidence of involvement of months' to perhaps years' duration.

The meninges showed a very fine sowing with minute tubercles, particularly in the arachnoid over the superior surfaces of the temporal lobes. It was still extremely early meningitis, but there is no question of the diagnosis. The main part of the brain has not been sectioned, so that we have no proof whether there was neurosyphilis or not.

A PHYSICIAN: What was the mass in the lower abdomen?

DR. MALLORY: There was none.

A PHYSICIAN: Were there any foci in the vertebrae?

DR. MALLORY: That was what we naturally guessed, but cross sections of the lumbar vertebrae did not show any old areas there. I think that the scoliosis must have been postural and not tuberculous.

A PHYSICIAN: Doesn't tuberculous meningitis give a positive Wassermann?

DR. MALLORY: I think that the Wassermann is extremely unreliable in any case of meningitis. I have seen it positive a great many times when I did not think there was any evidence of syphilis.

DR. MARSHALL: Without the best history of syphilis I should certainly discount a positive Wassermann practically entirely in the presence of meningitis.

#### GOOD TREATMENT FOR DOCTORS AND DRUGGISTS

PROHIBITION administrators are not expected "to practice medicine or pharmacy," and the policy of the Administration in charge of Volstead law enforcement will be to treat doctors and druggists as their responsible professions entitle them to be treated, Dr. J. M. Doran, the new prohibition commissioner, told the administrators at the session of their "tighten up" conference.—*New York Times*.

## THE BOSTON Medical and Surgical Journal

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### THE MALIGNED THYMUS

The thymus gland and its persistence in hypertrophy in infants, the part it plays in causing deaths of spectacular and dramatic suddenness, and its relationship to that will o' the wisp of pediatric pathology, status lymphaticus, has figured largely in pediatric practice during recent years. The occasional demonstration of a stymic shadow by the X-ray has increased this interest to a point where failure to X-ray the puerile chest before operation has, in some circles, almost reached the point of constituting malpractice.

The interesting part of this anti-thymic zeal lies in the fact that no scientifically acceptable evidence has ever been presented to show that an enlarged or persistent thymus ever figured in an operative death, or that status lymphaticus is actually a status at all. In the midst of the precipitate and voluble conclusions that have been reached concerning the thymus gland, it is of interest to find such a calm and collected presentation of the situation as Edith Boyd has provided for us in the current number of the *American Journal of Diseases of Children* [33: 807 (July) 1927].

The first description of death caused by suffo-

cation from pressure made on the trachea by the thymus emanated from F. Plater in 1614. Status thymicolympathicus was first described by A. Paltauf in 1890, and his conception of this condition, in which a large thymus goes hand in hand with general lymphoid hypertrophy, has been accepted to the present day. What has been lacking in this whole discussion has been a large series of observation of the thymus gland and the lymphoid tissue in infants and children who have not died as the result of wasting diseases, and it must be remembered that few well nourished children die during the first month of life. Accurate measurements under suitable conditions of normalities have now shown us that the thymus loses weight during the first two weeks of life, during which time it is being compressed in and around the mediastinal structures. After this time the gland begins to increase in size again, and it is at this stage that symptoms of pressure may be noted. The fact that thymic symptoms do not appear after the first year of life is because, although the thymus has been increasing in size, the chest has been growing at a much more rapid rate, so that the gland becomes relatively insignificant.

It is granted, then, that symptoms may be produced during the first year of life by mechanical pressure of a normal gland on the mediastinal structures and especially on the recurrent laryngeal nerve; it is doubtful if this pressure ever results in death. The picture of status thymicolympathicus is that of the normal thymus and lymphoid tissue of the *well nourished child*—the child that rarely comes to autopsy.

Cases of supposed death by status lymphaticus were then investigated by Dr. Boyd, and in every one another possible cause of death was found; one, for instance, died of an unusual accidental electrocution; one of strychnine poisoning; others of early pneumonia, etc.

This type of investigation indicates what many conservative pediatricians have already been thinking—that a diagnosis of death by status lymphaticus may not be a terrible one, because status lymphaticus is a purely imaginary condition.

### THE FIFTIETH ANNIVERSARY OF THE MEDICAL EXAMINER SYSTEM

In 1877, disgusted with the many abuses of the coroner system, the medical examiner system was established by the Commonwealth. The Massachusetts Medical Society and THE BOSTON MEDICAL AND SURGICAL JOURNAL played no small part in this reform. The report by Tyndale in THE BOSTON MEDICAL AND SURGICAL JOURNAL, March 1, 1877, makes very interesting reading to us today as it outlines the manifold abuses prevalent under the coroner system.

A very few of us consider the debt which

society owes to the medical examiners and what a powerful protection against criminal practices they are. It would be interesting to speculate, if it were not for these skilled and highly specialized protectors of society, how prevalent murder would become. Instead of being practised as a fine art as advocated by De Quincey, murder would degenerate to the level of a mere trade. One of the most noted murders of recent years, the Richeson case, would have been passed over as a case of suicide had it not been for the vigilance of a medical examiner.

Civilization is so complex and there are so many conflicting interests that our homicide rates would probably be far higher than they are, were it not for the fact that the vast majority of homicides are detected as such whether or not the police are able to carry out their duty of bringing to justice the criminal. When we contrast the brilliant work and just attitude of our medical examiners with the manifold evils of ignorance and corruption that existed under the old coroner system in Massachusetts and which still unfortunately exist in the coroner systems of the present day in certain parts of the country, we have just cause for pride. When, in 1918, New York City abandoned the coroner system, its system of medical examiners was based on that which has been functioning so long and well in Massachusetts.

#### SUMMER CAMPS FOR BOYS AND GIRLS. THE ADVANTAGES—AND DANGERS

THE great increase in camp life for boys and girls for part of the summer months is truly remarkable. In the large stations from which trains leave particularly for the northern part of New England one sees trucks piled high with innumerable trunks, tagged with cards for the different summer camps.

Parents who can afford a change of some months from the city for their families are increasingly aware that life for some time in a popular summer resort, with much social activity is not good for adolescent boys and girls, late hours and unrestricted exercise may cause such children to return to their school work in the fall irritable, tired out and entirely unfit for study.

The regular discipline of camp life, "early to bed and early to rise," and superintended exercise, are wonderful adjuncts to health.

The problem of medical care and supervision in these camps is a most important feature of their management.

Some of the larger camps are able to employ a full time physician for these various needs, but many of them depend on a local physician, busy with routine practice and often a considerable distance away. Others employ a trained nurse or a medical student for this purpose.

The danger of acute abdominal emergencies

such as appendicitis and also unrecognized typhoid fever occurring under such conditions are very real, and not a summer passes but that numbers of acute appendix cases are rushed to the nearest hospital centre, often after the usual dose of castor oil has not cured the supposed attack of "acute indigestion," sometimes unfortunately too late to save the patient.

The records of the hospital in centres of northern New England bear grim witness to this fact.

The problem is a hard one to solve as many of the summer camps cannot afford to pay for the skill which would afford them protection, but that something can be done to remedy present conditions is obvious. Most parents would be willing to pay somewhat more if definite reasons for the added cost were carefully explained to them.

The thoughtful physician, whose advice is asked concerning summer camps for the children, is sometimes deterred from advising certain camps on account of his knowledge of the serious possibilities mentioned above.

#### THIS WEEK'S ISSUE

Contains Articles by the Following Authors:

SHATTUCK, HENRY L., A.B.; LL.B. Harvard 1904; Chairman House Committee Ways and Means of the Massachusetts Legislature. Page 119. Address: 82 Devonshire Street, Boston.

CROTHERS, SAMUEL M., A.B.; D.D. Harvard 1899; Minister First Unitarian Church, Cambridge. Page 121. Address: 20 Oxford Street, Cambridge.

BIGELOW, GEORGE H., A.B.; M.D. Harvard 1916; Doctor of Public Health 1921; Commissioner of Public Health of Massachusetts. Page 123. Address: State House, Boston.

The three men mentioned above addressed the members of the Massachusetts Medical Society at the Annual Dinner.

O'HARE, JAMES P., A.B.; M.D. Harvard 1911; Instructor in Medicine, Harvard Medical School; Associate in Medicine, Peter Bent Brigham Hospital. His subject is: "The Development of Cardio-Vascular-Renal Disease." Page 126. Address: 520 Commonwealth Avenue, Boston.

O'HARA, DWIGHT, B.S.; M.D. Harvard 1919; Junior Visiting Physician, Boston City Hospital; Physician for Contagious Diseases at Waltham Hospital; Assistant in Medicine at Harvard Medical School; Lecturer in Therapeutics, Boston University School of Medicine. Address: 751 Main Street, Waltham. Associated with him is

GREWAL, J. S., B.Sc.; M.D. Boston University 1926; Interne, Waltham Hospital. Their subject is: "An Unusual Case of Pernicious Anæmia." Page 129. Address: Waltham Hospital, Waltham.



CURRY, EDMUND F., M.D. Harvard 1896; Visiting Surgeon, Union Hospital and Fall River General Hospital, Fall River. His subject is: "Recurrent Post-Operative Obstruction." Page 131. Address: 499 Hanover Street, Fall River.

REID, WILLIAM D., M.D. Harvard 1909; Assistant Professor of Cardiology, Boston University School of Medicine; Associate Member of the Evans Memorial; Chief of Heart Clinic for Out-Patients and Assistant Visiting Physician, Massachusetts Homeopathic Hospital. His subject is: "Cardinal Principles of Cardiac Diagnosis." Page 132. Address: 270 Commonwealth Avenue, Boston.

MERRIAM, JOSEPH, A.B.; M.D. Harvard 1923. Dr. Merriam has served as house officer at St. Luke's Hospital, New Bedford, and the Children's Hospital, Boston. Address: 198 Union Street, Framingham. Associated with him is

SMITH, LAWRENCE W., A.B.; M.D. Harvard 1920. Assistant Professor Pathology, Harvard Medical School; Director of Research, Boston Floating Hospital; Pathologist, New England Deaconess and Baptist Hospitals. Their subject is: "A Case of an Adrenal Adenoma." Page 135. Address: 240 Longwood Avenue, Boston.

### MISCELLANY

#### DR. BOWLER APPOINTED DEAN AT DARTMOUTH

The board of trustees of Dartmouth College, April 29, elected Dr. John P. Bowler dean of Dartmouth Medical School to succeed Dr. John M. Gile who died in 1925. Dr. Bowler, a native of Massachusetts, is a graduate of Dartmouth College and the Medical School of Harvard University. He was formerly associated with the Mayo Clinic, Rochester, Minn., and in 1925 received the degree of M.Sc. in surgery from the University of Minnesota. He then returned to Hanover to engage in the practice of medicine and to teach at Dartmouth Medical School.—*National Board Bulletin*.

#### APPOINTMENTS AT THE ROCKEFELLER INSTITUTE FOR MEDICAL RESEARCH

The Board of Scientific Directors of The Rockefeller Institute for Medical Research announces the following appointments and promotions:

##### NEW APPOINTMENTS

*Member*, Dr. Carl Ten Broeck.

*Associate*, Dr. Arthemy A. Horvath.

*Assistants*, Dr. Mortimer L. Anson, Miss Alice H. Armstrong, Dr. Alan M. Butler, Mr. Albert E. Casey, Mr. Edwin B. Damon, Dr. Claude E. Forkner, Mr. Henry P. Gilding, Dr. Alvin R. Harnes, Mr. Oscar M. Helmer, Dr. Alexander Hoffman, Dr. Perrin H. Long, Dr. Alfred E. Mirsky, Dr. Gordon H. Scott, Mr. Robert E. Steiger, Mr. Ernest Sturm.

*Fellow*, Mr. René J. Bubos.

### PROMOTIONS

*Associate Member to Member*, Dr. Thomas M. Rivers.

*Associate to Associate Member*, Dr. Carl A. L. Binger, Dr. Leslie T. Webster.

*Assistant to Associate*, Dr. Lillian E. Baker, Dr. Lawrence W. Bass, Dr. Walther F. Goebel, Dr. Lawrence S. Kubie, Dr. Fred W. Stewart, Mr. James van der Scheer.

*Fellow to Assistant*, Mr. Irving A. Cowperthwaite.

Dr. Ten Broeck is at present professor of bacteriology and Dr. Horvath assistant in medicine at the Peking Union Medical College, Peking, China.

Dr. Pierre L. du Noüy will spend the next year at the Pasteur Institute, Paris.—*Science*.

#### MASSACHUSETTS GENERAL HOSPITAL ANNUAL REPORT

The annual report of the Trustees for the year ending December 31, 1926, has largely to do with the special campaign for funds and with improvements in the physical plant of the hospital. As a result of the special campaign, \$1,200,000 was raised by public subscription, and as an accompanying result it is hoped that the fact of the hospital receiving no State, city or county aid has been instilled into the minds of the public.

The original Bulfinch Building has now been completely re-modelled and in addition to improved quarters for surgical patients, greater space, employed in a modern manner, has been furnished the children's wards, and new neurological, neuro-surgical and surgical wards have been provided. The building has thus been entirely fireproofed, and equipped with adequate laboratory and administrative facilities.

Work was begun in October, 1926, on the new connecting building between the Massachusetts General Hospital Out-Patient Building and the Eye and Ear Infirmary, and the structure is nearing completion. The preparation of working plans for the new hospital for people of moderate means, to include a new X-ray building have been authorized, and it is expected that work on this project will soon commence. It has unfortunately been necessary to postpone the project for a new ward building, a contagious department, a country branch, additional buildings for nurses and other personnel, and a new heating plant, although this last has necessitated installing new machinery in the old boiler house.

Two deaths have occurred in the Corporation, those of Dr. William Sturgis Bigelow and Mr. Galen L. Stone, and the staff has lost Dr. Harry F. Hewes. Dr. C. Morton Smith, Chief of the Syphilis Department, and Dr. Edward W. Taylor, Chief of the Neurological Department, have retired to the Board of Consultation, their places being taken by Dr. Henry D. Lloyd and Dr. James B. Ayer.

# KEEPING CLEAN HELPS TO KEEP WELL

## FROM CLEANLINESS INSTITUTE, 45 EAST 17TH STREET, NEW YORK CITY

ANOTHER important industry has joined the ranks of public welfare education. Cleanliness Institute, recently established by the Association of American Soap and Glycerine Producers, has added its strength to the public health workers, nurses, school teachers, social workers and others who sternly or beguilingly (depending on their technique) tell little Willie to wash his hands before eating and remind his father and mother that an example of personal and home cleanliness would not only help Willie but would advance community welfare.

Cleanliness Institute was born not to fight a lone battle but to join the ranks of those who have long been struggling to teach men, women and children in all walks of life and in all places the value of personal, community and industrial hygiene. The movement was auspiciously launched at a dinner on June 23rd at the Park Lane Hotel in New York City which was attended by 150 representatives of educational and health and social agencies. Their presence was a gesture of welcome to this new recruit to health promotion. The Commissioner of Health of the City of New York, Dr. Louis I. Harris, was among the speakers.

"No vaster task than the protection of public health faces us today," said Dr. Harris. "There is room for every new agency able and willing to spread the gospel of community, industrial and personal hygiene. We cannot fail to welcome such an agency with open arms. Cleanliness does have certain definite relations to health. If we could get all children to wash their hands before each meal, this alone would materially cut down their exposure to respiratory infections—and I use the term broadly to include not only pneumonia and kindred diseases but diphtheria as well."

The staff of Cleanliness Institute has been drawn from the fields of public health education and community organization. Directing its program is Roseoe C. Edlund, for six years executive head of the Hampden County Improvement League, Springfield, Mass., one-time assistant to the director of the Russell Sage Foundation, and before that Secretary to the President of Cornell University. Its educational consultant is Sally Lucas Jean, a pioneer in developing health literature for the school child. Dr. W. W. Peter, famous for his health work in China, who recently received from Yale University the Degree of Doctor of Public Health, has been retained as the Institute's health consultant. Miss Julia B. Tappan, formerly with the U. S. Bureau of Education, is director of the school department, and Miss C. Margaret Munson, recently of Mass. Institute of Technology, is research librarian. Offices for the Institute

have been opened at 45 East 17th street, New York City.

It is a national program that has been undertaken. It will operate for the present through three departments, research, information and education, all of which have placed themselves at the disposal of the existing health and social agencies of the country as auxiliary aids. The Institute, while it is the only agency specializing solely in cleanliness as it affects health and social progress will not duplicate the work of any health and welfare agencies, but will seek only to strengthen their programs. Educational literature for use among school children is in preparation and will be ready for distribution in the Fall.

Speaking at the dinner Dr. Peter referred to the progress in cleanliness and sanitation over the centuries and the resultant increase in the span of life. "We are indeed living in a Bath Age," he said, "but we still have a long way to go before we exhaust the possibilities of modern knowledge of the importance of cleanliness. There are still millions of people in the United States who are almost oblivious of the dangers resulting from lack of proper hygienic measures. There is a general agreement among those responsible for planning and conducting health activities that a high standard of cleanliness is an asset to them in their work because the practice of cleanliness assists directly in combating typhoid fever and other gastro-intestinal diseases whose causative organisms have in some way to enter through the mouth.

Miss Jean spoke of the advent of industry to the realm of health education, especially as it touches that most responsive individual the school child. "It is most gratifying," she said, "to those of us who have struggled to stimulate interest in the school child to have 'big business' join our forces. The school child has been discovered by business and the principals realize that the find is enormous, worthy of heroic efforts. There are about 25,000,000 children in the schools today with 1,000,000 teachers. To reach this 20 per cent of the population special efforts and strong methods are necessary. The life of the child is tied up with his instructors from kindergarten through college and it is essential to reach the child through the teacher. The commercial groups can give aid and assistance to teachers which school officials are not only glad to have but welcome."

In introducing Cleanliness Institute to the health and educational agencies Sidney M. Colgate, chairman of the Board said, "As the representatives of one of the country's basic industries we are not insensible to the fact that in contributing to a public service we are in some measure serving ourselves. We have a vital interest in cleanliness. Yet on the other hand, to promote cleanliness is a social service, and it is from this standpoint that we seek and offer

cooperation in existing movements that have for their aim the betterment of living conditions. We wish to put Cleanliness Institute upon an entirely unselfish and public service basis. We bespeak for our efforts the cooperation of every other public service organization that touches the field.

"The funds contributed for this service came from manufacturers who make approximately eighty per cent of all the soap used in the United States. In business we are rivals and competitors but in this movement we are one in a cooperative educational program. For the first year's work our industry has subscribed approximately \$500,000 and we are not seeking any financial support from other sources."

### THE CLASSIFICATION OF PATIENTS WITH TRUE OR SUSPECTED PULMONARY TUBERCULOSIS

CRITERIA for the classification of patients with pulmonary tuberculosis, suspected or proved, are given in the Forty-second Annual Medical Report of the Trudeau Sanatorium. These standards have been accepted by the American Sanatorium Association, so they are likely to come into general use.

Trudeau Sanatorium Diagnostic Criteria (Pulmonary only).

#### Non-Tuberculous:

1. No persistent rales in the upper one-half of the chest.
2. X-ray negative or showing a slight peritruncal lesion.
3. Tubercle bacilli never found in sputum.
4. Complement-fixation test for tuberculosis positive or negative.
5. No constitutional or focal reaction to the subcutaneous tuberculin test after the injection of 10 milligrams of O. T. once repeated. (Scale of doses: 0.0001, 0.001, 0.003, 0.005, 0.01, 0.01.)
6. Constitutional reaction to the subcutaneous tuberculin test of 10 milligrams (repeated once) or less without focal reaction as determined by physical signs (rales) or X-ray.
7. No history of unexplained hemoptysis of a teaspoonful or more.
8. No history of unexplained pleurisy with effusion.

#### Suspected Tuberculous:

1. No persistent rales in the upper one-half of the chest.
2. X-ray negative or showing a slight peritruncal lesion.
3. Tubercle bacilli never found in sputum.
4. Complement-fixation test for tuberculosis positive or negative.
6. The patient may react to the subcutaneous tuberculin test with evidence of focal reaction by physical signs (rales) but not by X-ray.
7. A history of unexplained hemoptysis of a teaspoonful or more, or,
8. A history of unexplained pleurisy with effusion, but not both (7, 8).

#### Tuberculosis (Pulmonary):

##### Non-Clinical:

1. No persistent rales in the upper one-half of the chest.

2. A parenchymatous X-ray lesion not explainable by other causes.
3. Tubercle bacilli never found in the sputum.
4. Complement-fixation test for tuberculosis positive or negative.
- 5, 6. The patient may or may not react to the subcutaneous tuberculin test after injection of 10 milligrams (once repeated) of O. T. All evidence of focal reaction by physical signs (rales) or X-ray must be absent.
7. No history of unexplained hemoptysis of a teaspoonful or more.
8. No history of unexplained pleurisy with effusion.
9. Symptoms must be absent.

*Clinical Tuberculosis:* Any one or more of the following:

1. Persistent rales in the upper one-half of the chest.
2. Parenchymatous X-ray lesion.
3. Tubercle bacilli in the sputum.
5. Focal reaction as determined by X-ray after the subcutaneous tuberculin test of 10 milligrams (once repeated) of O. T. or less. Symptoms must have been present at some time.
- 7, 8. An unexplained history of hemoptysis of a teaspoonful or more, together with an unexplained history of pleurisy with effusion.

#### AMERICAN SANATORIUM ASSOCIATION SCHEMA FOR THE CLASSIFICATION OF PATIENTS ON ADMISSION

##### LESION

Minimal: (Incipient): Slight lesion limited to a small part of one or both lungs.

No serious tuberculous complications.

Moderately advanced: A lesion of one or both lungs, more widely distributed than under Minimal, the extent of which may vary, according to the severity of the disease, from the equivalent of one-third the volume of one lung to the equivalent of the volume of an entire lung with little or no evidence of cavity formation.

No serious tuberculous complications.

Far advanced: A lesion more extensive than under Moderately Advanced. Or definite evidence of marked cavity formation.

Or serious tuberculous complications.

##### SYMPTOMS

A: (Slight or none): Slight or no constitutional symptoms, including particularly gastric or intestinal disturbance or rapid loss of weight; slight or no elevation of temperature or acceleration of pulse at any time during the twenty-four hours.

Expectoration usually small in amount or absent.

Tubercle bacilli may be present or absent.

B: (Moderate): No marked impairment of function, either local or constitutional.

C: (Severe): Marked impairment of function, local or constitutional.

##### SCHEMA FOR THE CLASSIFICATION OF SUBSEQUENT OBSERVATIONS

Apparently cured: All constitutional symptoms and expectoration with bacilli absent for a period of two years under ordinary conditions of life.

Arrested: All constitutional symptoms and expectoration with bacilli absent for a period of six months; the physical signs to be those of a healed lesion; roentgen findings to be compatible with the physical signs.

Apparently Arrested: All constitutional symptoms and expectoration with bacilli absent for a period of three months; the physical signs to be those of a

healed lesion; roentgen findings to be compatible with the physical signs.

Quiescent: Absence of all constitutional symptoms; expectoration and bacilli may or may not be present; physical signs and roentgen findings to be those of a stationary or retrogressive lesion; the foregoing conditions to have existed for at least two months.

Improved: Constitutional symptoms lessened or entirely absent; cough and expectoration with bacilli usually present; physical signs and roentgen findings to be those of a stationary or retrogressive lesion.

Unimproved: Essential symptoms unabated or increased; physical signs and roentgen findings to be those of an active or progressive lesion.

Died.

#### HONORARY FELLOWSHIP OF THE ROYAL ACADEMY OF MEDICINE OF IRELAND

THE Royal Academy of Medicine of Ireland held a special meeting on June 27th to confer its Honorary Fellowship on Prof. Harvey Cushing, of Harvard University. The general secretary presented him to the Academy in the following words:—

*Sir President, Ladies and Gentlemen:*—I have the honour to present to you one who does not need any introduction to this Academy. I rejoice that this is so, for indeed I should be at a loss to describe him fittingly. Eminent as a physician, as a surgeon, and as a physiologist, he has taken the whole realm of medicine as his province, and in that realm all acknowledge him as a chief. Intellectually he towers among his fellows, as those of whom he has written tower physically among ordinary mortals. His brilliant work commands our admiration, but he has won our love and gratitude by enshrining for us in two noble volumes the memory of his great master, so dear to us all. Let us then, as a fellow-worshipper at the same shrine as ourselves, receive him gladly; let us honour our Academy by enrolling him a Fellow, and let us for himself receive him with our loudest plaudits. Harvey Cushing!

Prof. Cushing was then admitted a Fellow of the Academy by Sir James Craig, President, and he returned thanks for his election. He then delivered a brief address dealing with his recent experiences in electro-surgical work, particularly in cerebral surgery.

#### HONORARY DEGREES AT DUBLIN UNIVERSITY

Honorary degrees were conferred at the Summer Commencements of Dublin University, held on June 28th, on Sir Humphry Davy Rolleston, Regius Professor of Medicine at Cambridge, and on Prof. Harvey Cushing.—*The Lancet*.

#### ETTINGER TO STUDY IN SCHOOL OF HEALTH WORK

DR. WILLIAM L. ETTINGER, recently made Superintendent Emeritus of the New York city schools, will take up the duties of his new office

in September, making a study of health work in the schools.

Dr. O'Shea, Superintendent of schools, has asked Dr. Ettinger to study the following four questions:

Whether the State Education law should be amended to require a physical examination of every child, either six months prior to or six months after admission to school.—What changes should be made in the present course of study and syllabus in health education?—What improvements should be made in present methods of determining and correcting physical defects of school children?—Are the dental and other health clinics now in operation in the schools properly equipped and conducted?

Dr. Ettinger has also been asked by the present Superintendent to serve as an advisory member of a committee studying modification in the present course of study in health education.—*New York Times*.

#### EIGHTH PAN AMERICAN CONFERENCE SCHEDULED FOR PERU IN OCTOBER

THE Eighth Pan American Sanitary Conference will be held in the city of Lima, Peru, from October 12 to 20 of this year, and a tentative program of this conference, looking toward the enhancement of health and sanitation measures in the countries comprising the Americas, already has been drawn up.—*U. S. Daily*.

#### THE PAY CLINICS OF THE BOSTON DISPENSARY

THESE pay clinics are held in the evening and are conducted for those who cannot afford to lose the wages earned in the day time.

These clinics are open Mondays, Wednesdays and Fridays. The attendance has grown from one clinic in 1913 to the present comprehensive service and about forty thousand visits are made to the clinic yearly. The average attendance is about three hundred and eighty-five. The dental clinic is operated two evenings a week.

The equipment is sufficient to enable the attending physicians to provide thoroughly scientific diagnostic and therapeutic service.

The size and scope of these clinics will be a revelation to many.

#### A TRI-STATE CONFERENCE

NEW YORK, NEW JERSEY AND PENNSYLVANIA State Medical Societies have adopted the custom, which seems to be growing in popularity, of having conferences to which representatives of the respective societies are sent for the purpose of discussing problems of interest.

This is the same idea which led to the formation of the New England Medical Council which has recently held its second general meeting and which proved to be of interest to those present.

A full report of the New England council will be published very soon.



## ORGANIZATIONS CONCERNED WITH PROBLEMS OF BLINDNESS HAVE AN EDUCATIONAL EXHIBIT

TWENTY organizations concerned with the care of the blind and the prevention of blindness have pooled their resources in an educational exhibition of work for and by the blind residents of New York State,—the first of its kind—which has been assembled by the New York State Commission for the Blind and is now on display at the Art Center, 65 East 56th Street.

The exhibition which covers practically the entire ground floor of the Art Center shows the tremendous handicaps under which the blind labor, the extent to which blind persons—from childhood on to old age—have succeeded in overcoming these handicaps in order to secure an education or to become at least partially self-supporting, and finally the exhibit of the National Committee for the Prevention of Blindness shows the extent to which these handicaps may be altogether avoided.

A graphic chart of the National Committee tells this story:

"Industrial accidents cause the loss of sight of one out of seven blind persons—this is preventable;

"Babies' sore eyes causes the loss of sight of one out of nine children in schools for the blind—this is preventable;

"Venereal diseases blind or visually handicap thousands of persons—this is preventable;

"Defective vision hampers one out of every eight school children—this is largely preventable."

## REVOCATIONS OF MEDICAL REGISTRATION

Editor BOSTON MEDICAL AND SURGICAL JOURNAL:

This is to inform you that at a meeting of the Board of Registration in Medicine held Thursday, July 21st, the registrations of the following physicians were revoked:

Dr. Ralph E. Hawley, The Breakers, Shore Drive, Lynn.

Dr. John J. Donoghue, 10 Vernon Street, Worcester.

Dr. Arthur S. Hudson, Middlesex Avenue, Wilmington.

Very truly yours,

DR. FRANK M. VAUGHAN, *Secretary.*

## DEPARTMENT OF COMMERCE, WASHINGTON

UNITED STATES CHIEF FACTOR IN INTERNATIONAL  
TRADE IN PREPARED MEDICINES

ANNUAL EXPORTS 50 PER CENT GREATER THAN  
GREAT BRITAIN, ITS NEAREST RIVAL. GERMAN  
PRODUCTS DOMINATE TRADE ON CONTINENT

THE United States is the world's largest producer, consumer and exporter of prepared medicines, a report issued today by the Commerce

Department's Chemical Division reveals. According to the last census the value of patent medicines and druggists' preparations manufactured in this country in 1925 was nearly \$320,000,000. During the same period our exports of this class of commodity had a value of nearly \$20,000,000.

The total import trade of the world in all forms of medicinals amounts to approximately \$110,000,000 each year, about two-thirds of which represents prepared medicines and medicinal specialties. The United States enjoys between 20 and 25 per cent of this international trade in prepared medicines. Divided according to continents, the report shows the annual imports of the world are as follows: The Americas, \$27,000,000; Europe, \$20,000,000; and the Far East and Africa, \$27,000,000.

The United States has only three competitors in the international trade in prepared medicines—the United Kingdom, France and Germany. In 1925 British exports were 66 per cent of those of the United States; French exports were about 60 per cent while German shipments amounted to approximately one-half.

Fully 50 per cent of the British shipments of medicinals are destined for the Far East and Africa and 75 per cent of them goes exclusively to British possessions. Canada buys one-half again as much prepared medicines from the United States as from Great Britain and we sell the British approximately six and a half times more of these commodities than we buy from them.

French exports of medicines and pharmaceuticals are distributed throughout the world and enjoy no distinct advantage in any particular region. Germany is the chief supplier of prepared medicines to continental markets, her largest business being with contiguous countries.

According to the report, United States prepared medicines dominate in the countries of the Western Hemisphere. The five largest individual markets are Great Britain, Cuba, Mexico, Colombia and Canada. Fully 80 per cent of all our exports in this line are destined for about fifteen English and Spanish speaking countries. Thirty countries account for 93 per cent of our total foreign business, the least of these markets taking more than \$100,000 worth of medicines each year. The only European countries in this list are Great Britain, Ireland, and Spain.

The European markets and Canada, the report points out, are more highly educated as to the use of preventive medicines than other areas and are our best markets for specifics. The Latin Americans, largely due to the debilitating climate which prevails in so many Central and South American countries, consume large quantities of tonics. Efforts are being made, however, to educate the people in these areas in the use of preventive medicines and the same is true of the natives of Far Eastern countries.

DISEASE PREVALENCE FOR WEEK,  
DIPHTHERIA GAININGMEASLES AND SCARLET FEVER, HOWEVER,  
DECLINE FOR PERIOD

WITH the exception of measles and scarlet fever, all communicable diseases reported to the United States Public Health Service by State health officers, showed increases in prevalence for the week ended June 18 of this year, as compared with the same week of 1926, according to the weekly review on the incidence of communicable diseases made public by the Public Health Service July 7.

The greatest increase was in the incidence of diphtheria, 40 States having reported 1,453 cases of this disease for the current surveyed week, as compared with 1,055 cases for the corresponding week of the preceding year.

Weeks ended June 18, 1927, and June 19, 1926:

CASES REPORTED		1927	1926
<b>Diphtheria:</b>			
40 States .....		1,453	1,055
101 cities .....		895	662
<b>Measles:</b>			
39 States .....		7,403	13,853
101 cities .....		2,143	4,373
<b>Poliomyelitis:</b>			
39 States .....		32	21
<b>Scarlet fever:</b>			
41 States .....		2,674	2,898
101 cities .....		1,177	1,360
<b>Smallpox:</b>			
40 States .....		483	378
101 cities .....		112	67
<b>Typhoid fever:</b>			
40 States .....		513	377
101 cities .....		77	66

—United States Daily.

A REPORT OF THE INTERNATIONAL  
RABIES CONFERENCE

THE first Medical Conference of a real international character, sponsored by the Public Hygiene Committee of the League of Nations, was held in Paris recently.

Questions pertaining to the aetiology, therapy and prophylaxis of Rabies were thoroughly discussed. That it is our urgent duty to combat this terribly and mercilessly ravaging scourge was the unanimous opinion of the representative sanitarians present. Thirty nations sent their most prominent experts as Deputies to this Conference. Meetings held in the spacious halls of the Paris Pasteur Institute were attended by more than sixty prominent members of the medical profession. Besides leaders of the greater "lyssa-institutes" several celebrated bacteriologists were present. Among the delegates from Germany were Pfeiffer, Neufeld, Koch and Prausnitz; France was represented by Roux,

Calmette, Levaditi, Marie, and Ramon. The Italians sent Puntoni and Fernami. Kraus represented the Austrians. Belgium was represented by Professor Bordet; Switzerland by Sobernheim; Russia by Zlatogoroff and Japan by Kitajima.

Special interest was lent to the Conference by the fact that this was the first occasion since the termination of the War when the representatives of German medical science, as such, have crossed the frontier and accepted the hospitality of the French nation.

During the Conference the four cardinal problems of the rabies question were debated as follows:

1. The morphology and biology of the rabies-virus.
2. The technic of immunization against rabies.
3. The dangers of vaccination.
4. The immunization of animals against rabies.

In order to have sequence in the deliberations, the Conference appointed four sub-commissions. These commissions, with the coöperation of the members of the Conference, arranged for the recording of the discussions.

Meetings of the commissions were presided over by Professor Bordet. After having listened to the report of Professor Marie relating to the more important features of the investigations in regard to the "lyssa-virus" and having inspected the microscopical slides of Levaditi and Manouelian, the Conference arrived at the following conclusion:

That it cannot decide at present as to whether the virus of lyssa is a bacterium or a protozoon. Neither had the Conference means to determine whether the Negri bodies are evolutionary forms of a certain living microorganism, or are the degenerative products of the nerve cells.

Another commission partly under the presidency of Bujwid and McKendrick, and partly under that of Pfeiffer and Zlatogoroff, debated the question of the danger of the immunization technic and vaccination. The gist of these discussions was as follows:

A perfect and reliable immunity may be reached as well by the Pasteur, as by the Hogyes methods both using living virus. The living virus from the point of view of postvaccination paralysis is innocent, except in some exceptional cases. Comparing the protective action of the immunity produced by the living and killed virus, the former seems to be more reliable. Therefore, the use of the killed virus is approved only when the vaccine has to be conveyed to distant places. The cause of postvaccination lameness is, for the time being, unknown. It is, however, quite certain that some predisposing factors play important roles as for example,

alcoholism, syphilis, nervous diseases, age, etc.

Some of the members of the Conference were of the opinion that, with the use of the glycerin and carbol-virus, postvaccination lameness is less frequent. The Conference emphasized the necessity of the institutes making investigations at regular intervals as to the virulence of the fixed virus-stems used by them. The basis of this desideratum is formed by the probable assumption according to which there is a certain connection between the postvaccination accidents and the different reactions with respect to the virulence of the type of bacillus. It was proposed that the hygienic section of the League of Nations in company with some Pasteur Institutes should attempt the elaboration of a type of virus of constant virulence and immunizing action. It accentuated the necessity of Pasteur Institutes the world over coöperating to solve the two questions under discussion. To this end the different institutes will report their work and observations to the hygienic section of the League of Nations.

The fourth commission under the presidency of diVestea and Kitajima after having heard the summarizing report of Professor Valee and after a subsequent debate lasting for several hours, arrived at the following conclusion: Although there are numerous data of great importance at our disposal in regard to the question of the preventive immunization of animals against rabies, all of which data are apt to create the greatest confidence with respect to these experiments, the Conference did not feel justified in proposing the modification of the present sanitary laws. The Commission deems the practice of preventive immunization of animals desirable only in those places where rabies is especially prevalent and even there only under the supervision of competent veterinarians.

The deliberations of the Conference were carried on from first to last with cordiality and moderateness. This spirit was fostered by the well-conducted reception and by the hospitality extended by the French to the Conference members. The Commissions left all questions open for further study. Cause of the seemingly moderate success is found in the fact that the Conference has carefully weighed all observations, some of which are very contradictory. Under the circumstances we must not underestimate the result; for the Conference, having focused attention on the present state of the lyssa question, has pointed the way for most serious investigation.

#### A STUDY OF 4000 BACKWARD PUPILS

MASSACHUSETTS has taken the initiative in the study of retarded and mentally deficient public school children as reported by Dr. Neil A. Dayton of Boston, Director of the Division of Mental Deficiency of the State Department of Mental

Diseases. The work was prosecuted by fourteen travelling clinics. Dr. Dayton's report covers 4040 children examined who were retarded three or four years in their studies and of these 75% were found deficient. Dr. Dayton found that the feeble minded are found more commonly in the first or second children rather than the last child born to a family. The feeble minded are more common in large families. The mentally deficient are not as a rule puny, under weight or under size. The average age of these children studied was 13 years but the average mental age was eight years. The average intelligence was between 60 and 69 with boys showing better average intelligence.

In answer to the question, "Is the problem of the defectives and the insane so vast that it cannot be solved?" Dr. Dayton said, "No, the only danger would come if we ignored the problem. Then the number of feeble minded whom the State would have to support would be so great as to swamp us with taxation. About 2 per cent. of the population of the United States—something under 3,000,000 people—are mentally deficient."

#### TRACE OF MERCURY EASILY DETECTED

As small a proportion as one part of mercury in 20,000,000 parts of the atmosphere can be measured accurately by a device which has been developed in the research laboratory of the General Electric Company; one in 8,000,000 parts can be determined quickly.

Mercury poison is accumulative; it seems to make little if any difference whether the amount of vapor is inhaled as relatively large amounts in a short period of time, or as slight amounts over a period of months. Because of the increased industrial use of mercury in heating operations, in various chemical processes and in the newly developed mercury turbine, it has become important to have a method whereby leaks in apparatus and traces of mercury vapor in the atmosphere can be detected quickly.

Previous methods of determining the amount of mercury vapor in the atmosphere were tedious processes that required considerable time and the services of an expert chemist, and even then the results were usually far from accurate, especially when considering tiny amounts of the substance. The new method gives quick results, does not require chemical training to carry out, and is accurate.

The principle on which the new method is based is a reaction between a solid substance, selenium sulphide, and the mercury vapor, with the reaction product a colored substance easily observable with the eye. The yellow selenium sulphide is applied as a coating on paper. The paper is blackened on exposure to air containing mercury vapor, the degree of blackening depending on the concentration of the mercury, the

time of exposure, and various other factors which can be definitely controlled. There seems to be practically no lower limit to the concentration that can be detected by this method.

For continuous and automatic registration of the mercury vapor, there has been devised a system in which a continuous strip of the coated paper is drawn slowly over an opening through which the air flows, a small clock motor moving the strip of paper at a uniform rate. A short time after the exposure, the colored strip of paper can be compared with a standard scale, in which the different shades from yellow to black have been calibrated in terms of mercury concentration.

If an incandescent lamp is placed in front of the strip of paper and a photoelectric cell behind it, the amount of light reaching the cell will depend on the amount of blackening of the paper. The light can regulate the readings of an ammeter, so that the concentration of the mercury vapor can be determined either by observing the color of the paper or by reading the ammeter. It is also possible to so arrange the photoelectric cell circuit that, should the mercury concentration become dangerously high, a warning gong will be sounded. The apparatus is then an automatic chemist.—*News Bureau, General Electric Company, Schenectady, N. Y.*

#### A COMPLIMENT TO DR. EVARTS A. GRAHAM

*The Journal of the Missouri Medical Society* for July, 1927, publishes the following:

"Dr. Evarts A. Graham, St. Louis, and his associates were honored by the St. Louis Medical Society at its meeting on June 7, for discovering a method of visualization of the gallbladder by the X-ray. A gold medal was awarded Dr. Graham and certificates of merit were awarded to his associates, Drs. Glover H. Copher, Warren H. Cole and Sherwood Moore. Dr. Graham was the recipient of an additional honor on June 9 when Central College at Fayette, Mo., conferred upon him the honorary degree of Doctor of Laws."

Dr. Graham has accepted the Shattuck lectureship for next year. The Massachusetts Medical Society is thus especially honored by Dr. Graham.

#### THE TOOTH BRUSH

At the suggestion of the New Haven Health Department a preliminary study of the bacteriology of the tooth brush has recently been completed by C.-E. A. Winslow and Louis DeAngelis of the Yale Department of Public Health. Twenty-four tooth brushes were submitted by different individuals. These brushes were taken to the laboratory in sterile tubes. Each brush was immersed in a large test tube containing salt

solution and rubbed up and down over the surface of an inclined strip of corrugated glass in the tube. The tooth brush was then removed from the tube and the saline suspensions used for the various examinations, hence the information obtained was based not on the bacterial content of the brushes but from the bacteria that were removed from them.

There was a wide variation in the number of bacteria found on these brushes from zero to over three million. Besides the number of germs, the investigators were interested in several varieties of bacteria. Acid-forming bacteria were found in numbers ranging from zero to 20,000 per brush. Hemolytic streptococci were found in amounts ranging from zero to 300,000. No *Bact. coli* were found.

Apparently there is a close relationship between the length of time that a tooth brush has been in use and the number of bacteria it contains. The medium bacteria count of brushes used three months or less was 900 as contrasted with over 160,000 bacteria on brushes used four months and over. The only brushes that showed over 1,000 acid-forming bacteria were two, one of which had been used for a year and two months, and the other for two years. The two highest counts for hemolytic streptococci were on brushes that had been in use for one and two years respectively.

As a control to this part of the study, six unused brushes purchased in the open market, all of which except one were exposed to the air, yielded bacterial counts from zero to 210. Three of these brushes showed hemolytic streptococci and three showed acid forming bacteria.

Brushes used in mouths where the teeth were in good condition had low bacteria counts. On the other hand brushes used in mouths where the teeth were dirty or had cavities had 100 times as many bacteria.

The number of bacteria was also found to be related to the condition of the brush. Brushes that were very dirty or matted not only yielded large numbers of bacteria but many hemolytic streptococci and acid formers.

The use of a dentifrice is shown to have an effect on the number of germs on tooth brushes. Five brushes used by individuals who did not use a dentifrice all had high bacterial counts.

Hot water was employed for rinsing the brushes by five people and four of the five brushes had a very low number of bacteria.

In the group of twenty-four brushes there were three where it was admitted that they were used promiscuously. These all showed high counts and were high in acid formers and hemolytic streptococci.

This study also suggests that the number of bacteria on a tooth brush after using does not increase on standing five and nine hours, but decreases.—*Bulletin of New Haven, Conn., Health Department.*



## BETTER MILK FOR TOWNS

FOR a number of years, the larger cities have supervised their milk supplies to insure a safe and clean milk supply for their children. In some towns, very little work has been done along this line. In fact, the requirements of a better milk supply for the large cities have sometimes resulted in a poorer milk supply for certain towns. Good milk finds a ready market in cities where standards are high while poor milk is dumped upon communities where no standards have been established and no regulations are in force.

A movement now under way is designed to improve these conditions. Last year, a representative of the American Child Health Association spent some time in Connecticut making a survey of the milk situation in cooperation with the State Dairy and Food Department and the State Department of Health. Samples of milk were collected from 74 towns by State Dairy and Food Inspectors and examined in the State Department of Health Laboratories. The results of these examinations were studied and tabulated by a representative of the American Child Health Association. Thus the milk survey conducted in 74 cities and towns of the state was a cooperative arrangement between these three organizations.

The follow-up of this survey is now under way and suggestions are being made to local communities for improving their milk supplies. Prior to beginning the follow-up campaign, a conference was held by representatives of the various departments interested in the matter to map out a course of procedure. At this conference it was decided to suggest two vital factors to local health officers who wish to improve the milk supplies in their communities. These two points are as follows:

1. Licensing of milk producers and dealers. This will furnish knowledge as to who are producing and handling milk for sale in the community. Without this knowledge supervision of the milk supply is a most difficult undertaking.

2. Requiring all cows supplying milk to the community to be tuberculin-tested unless the milk be subjected to the process of pasteurization. This action will protect the consumers of milk from tuberculosis which is often conveyed to man especially to children, by drinking milk from tuberculous cows.

Health officers of some towns and boroughs have already adopted milk regulations. With the spread of this movement, those towns having no regulations are likely to find themselves the dumping ground for milk that can not be sold in other cities and towns where such regulations exist. The way to prevent such a situation is for each town to take the necessary steps to protect its own milk consumers.—*Connecticut State Department of Health.*

## RECENT DEATHS

**KENNEDY**—DR. ALEXANDER GLADSTONE KENNEDY, a Fellow of the Massachusetts Medical Society, died in Boston, July 9, 1927, aged 56.

He was a graduate of the College of Physicians and Surgeons, Baltimore, in 1897. He settled in Boston and joined the State medical society the next year. He was a Mason.

**REDMOND**—DR. JAMES WILLIAM REDMOND, a graduate of Harvard Medical School in the class of 1892, died at his home in South Boston, June 7, 1927, following a month's illness, aged 60.

He was born at St. John, N. B., May 11, 1867, but came to South Boston before he was a year old and continued to make his home there until the time of his death.

He was a graduate of the Lawrence Grammar School, of Phillips Exeter Academy, and of Harvard Medical School in 1892. He is survived by a widow, Ann, three sons and three daughters. One of the sons, James W., Jr., was graduated recently from McGill University, Montreal.

Dr. Redmond was a member of the Knights of Columbus and numerous other fraternal organizations, as well as the American Medical Association and the Massachusetts Medical Society.

## CORRESPONDENCE

### A CRITICISM OF SOME OF THE OFFICERS OF THE MASSACHUSETTS MEDICAL SOCIETY

Boston, Mass., July 14, 1927.

*Editor, Boston Medical and Surgical Journal:*

THE BOSTON MEDICAL JOURNAL may be sufficiently interested in this letter as to take action to remedy the arbitrary and misuse of discretion of some of the officers of the Massachusetts Medical Society.

It is only reasonable to assume that there are other members of the medical profession like myself throughout the State who have had similar grievance with that same body of men.

The Massachusetts Medical Society officials have repeatedly refused me recognition as a graduate of a recognized Medical School.

The facts in my case are as follows: I obtained my Medical Diploma in 1908 from the Baltimore Medical College after completing a four-year graded course in Medicine. In 1912 the Baltimore Medical College changed its name, or, in other words, merged with the University of Maryland and ceased to exist as such in name, not in fact, and forthwith the University of Maryland conferred upon me their Medical Diploma in 1912, making me an alumnus of their school. Prior to 1912, however, the Baltimore Medical College was recognized as an "A" Medical School in 48 States of the Union, all the Provinces of Canada and the whole of the British Empire, as certified by the enclosed sworn certificate under Seal by the American Medical Association, the highest official Authority on Medical Education in the United States and Canada.

The Massachusetts Medical Society has declared that the Baltimore Medical College was an unrecognized Medical School, and that it was wiped out of existence with a number of other schools of its class. They handle assumptions as if they were facts, and let it go at that.

The truth of the matter is that the Baltimore Medical College always was and always will be an "A" Medical School. It is a larger Medical School today than ever, with the same faculty, same buildings, same hospitals, only more of them, with the name changed to the University of Maryland, as verified by the American Medical Association.

The humiliating terms upon which the Massachusetts Medical Society have offered me membership in their society I shall comment on briefly. That is to say: If I procure certificates of character and professional ability from five men who are members of the Massachusetts Medical Society and who have known me for at least five years, and after presenting these applications to the Committee on Medical Education permission will then be given me to present myself for examination. In other words they want me to go to my professional brothers who have known me for the past fifteen to twenty years and confess to them that I am a deceiver and impostor, that I am a graduate of an unrecognized Medical School, although I have given you the impression that I was a graduate of an "A" School. Now since you have learned that I have deceived you all those years, would it be possible for you to grant me letters of recommendation as to character and professional ability for membership in the Massachusetts Medical Society?

That is a striking example of the ethics of the Massachusetts Medical Society.

To illustrate: A "Ph.D." of Cornell, who is professor in one of our New England colleges, told me some time ago that he was informed by a Boston doctor years before that I was a graduate of a cheap Medical School, not recognized, and, by the way, this doctor was a member of the Massachusetts Medical Society, and the school from which he graduated was rated in Class "B" by the American Medical Association, nor was it necessary for him to procure five members of the society to vouch for him to join.

Instances like that I could multiply a hundredfold, not to mention the humiliation to myself and family by not being recognized by the Massachusetts Medical Society.

I ask no recognition today from the Massachusetts Medical Society. I hold degrees from three Universities, and have Appointments in three of the Hospitals of the city, including Boston Dispensary.

I am also a member of the Mystic Shrine, Aleppo Temple, and a 32nd degree Mason. It is not, however, to the credit of the Massachusetts Medical Society that a reputable physician of nineteen years practice of medicine in the State and a graduate of an "A" Medical School was forced to appeal to the American Medical Association for recognition in order to hold and receive Appointments in the hospitals of the city of Boston.

I presented to the Massachusetts Medical Society a list of a score or more names of graduates of Baltimore Medical College in this State who are members of the Massachusetts Medical Society to prove to them that the school was recognized; but they brushed the evidence all aside and declared that the Baltimore Medical College was not recognized by the Council of the Society as furnishing a standard medical education. It would be interesting to read their reasons for their justification in making such slanderous statements.

Kindly return to me the enclosed A. M. A. certificate, and oblige.

Yours very truly,

HECTOR J. MACLEAN.

American Medical Association  
Council on Medical Education and Hospitals  
535 North Dearborn Street, Chicago, May 9, 1927.

*To Whom It May Concern:*

This is to certify that the Baltimore Medical College was rated in Class A by the Council on Medical Education and Hospitals of the American Medical Association from 1907 when the first classification was prepared until 1912 when the school was merged with and became a part of the University of Maryland School of Medicine, Baltimore.

It was an institution rated in Class A, therefore,

in 1908 at the time a diploma was issued to Hector John MacLean.

AMERICAN MEDICAL ASSOCIATION,  
Per Nathan P. Colwell,  
Secretary of the Council on  
Medical Education and Hospitals.

Subscribed and Sworn to before me this 9th day of May, 1927.

E. C. SHELBY,  
Notary Public.

My Commission Expires May 24, 1930.

EDITORIAL NOTE

We have conferred with the Chairman of the Committee on Medical Education and Medical Diplomas, who, after examination of the material on file, readily acknowledges the validity of the objections presented by Dr. MacLean. His explanation is that when the matter was before the Committee the status of the Baltimore Medical College was probably confused with that of one of the other Baltimore schools of which some were not recognized. This mistake is to be regretted and we are confident that the error will be corrected.

We trust that our correspondent will be generous and recognize the fallibility of even the best intentioned persons.

TWO CONVICTED CHIROPRACTORS ACCEPT  
THE SENTENCE OF THE COURTS

The Commonwealth of Massachusetts  
Department of Public Safety  
State House, Boston

July 20, 1927.

From: Joseph V. Daly.

To: Walter P. Bowers, M.D.

Subject: Two chiropractor cases at Orange, Mass.

This is to notify you in accordance with the request in your letter of June 22 that in the case of Hayden W. Allen, chiropractor of Athol, Mass., who was fined five hundred dollars (\$500) for violation of the statute covering the practice of medicine and who appealed his case later withdrew the appeal and paid the fine imposed upon him by the court at Orange.

In the case of Glenton S. Thompson of Orange, who was fined three hundred dollars (\$300) by the Orange court for violation of the laws relating to the practice of medicine and appealed, yesterday, July 19, retracted his plea of not guilty and plead guilty and paid the fine of three hundred dollars (\$300).

JOSEPH V. DALY, State Detective.

PRESCOTT'S DESCRIPTION OF VERRUGA PERUANA IN HIS "CONQUEST OF PERU"

*Mr. Editor:*

According to Hyde, Verruga Peruana was first described in the sixteenth century by Zarate of Lima in his "Conquest of Peru" in 1543.

Pizarro's expedition started from Panama in January, 1531. The account of the expedition follows:

"Pizarro, having refreshed his men, continued his march along the coast, but no longer accompanied by the vessels, which had returned for recruits to Panama.

"The road, as he advanced, was checkered with strips of sandy waste, which, drifted about by the winds, blinded the soldiers, and afforded only treacherous footing for man or beast. The glare was intense, and the rays of the vertical sun beat fiercely on the iron mail and the thick quilted doublets of cotton, till the fainting troops were almost suffocated by the heat.

"To add to their distress, a strange epidemic broke

out in the little army. It took the form of ulcers, or rather hideous warts of great size, which covered the body, and when lanced, as was the case with some, discharged such a quantity of blood as proved fatal to the sufferer. Several died of this frightful disorder, which was so sudden in its attack and attended with such prostration of strength that those who lay down well at night were unable to lift their hands to their heads in the morning."

"The epidemic, which made its first appearance

during this invasion, and which did not long survive it, spread over the country, sparing neither native nor white man."

"It was one of those plagues, from the vial of wrath, which the destroying angel, who follows in the path of the conqueror, pours out on the devoted nations."

Very truly yours,

WM. PEARCE COUES, M.D.

Prouts Neck, Me.,  
July 13, 1927.

DISEASE INCIDENCE IN CONNECTICUT—WEEK ENDING JULY 2

DISEASE	1927				1926			
	Week ending June 11	Week ending June 18	Week ending June 25	Week ending July 2	Week ending June 11	Week ending June 18	Week ending June 25	Week ending July 2
Actinomycosis	1	-	-	-	-	-	-	-
Anthrax	-	-	-	-	-	-	-	-
Botulism	-	-	-	-	-	-	-	-
Cerebrospinal Men.	-	2	-	-	1	2	1	1
Chickenpox	123	123	90	33	22	56	92	39
Conjunctivitis Inf.	-	-	-	-	-	-	-	-
Diphtheria	31	28	34	31	22	9	15	13
Dysentery Acob.	-	-	-	-	-	-	-	-
Dysentery, Bac.	-	-	-	-	-	-	-	-
Encephalitis Epid.	1	-	-	-	1	-	1	-
Favus	-	-	-	-	-	1	-	-
German Measles	5	6	3	3	5	45	19	24
Hockworm Infection	-	-	-	-	-	-	-	-
Influenza	2	-	-	2	1	5	2	-
Leprosy	-	-	-	-	-	-	-	-
Malaria	1	1	1	2	2	-	-	1
Measles	67	55	68	47	119	444	349	244
Mumps	37	47	30	20	23	22	6	5
Paratyphoid Fever	-	-	-	-	-	-	-	-
Pneumonia, Broncho	19	24	10	15	30	24	24	22
Pneumonia, Lobar	25	33	23	10	9	39	38	26
Polionyelitis	-	1	-	-	-	-	-	-
Scarlet Fever	69	56	48	23	26	79	78	49
Septic Sore Throat	5	2	6	2	-	1	-	-
Smallpox	-	-	-	-	2	1	-	-
Tetanus	-	-	-	-	-	-	1	-
Trachoma	-	-	-	-	-	-	-	-
Trichinosis	-	-	-	-	-	-	-	-
Tuberculosis	28	33	50	29	28	28	42	25
Tuberculosis (o.f)	3	4	2	2	2	2	4	1
Typhoid Fever	2	1	-	2	5	3	1	4
Typhus Fever	-	1	-	-	-	-	-	-
Whooping Cough	13	21	16	12	45	44	53	17
Gonorrhoea	24	28	55	16	14	45	9	11
Syphilis	29	21	24	36	30	56	17	12

\*Average for two years. Last reportable January 1, 1925.

Remarks: No cases of cholera, Asiatic, glanders, plague, rabies in humans and yellow fever during the past seven years.

CONNECTICUT DEPARTMENT OF HEALTH  
MORBIDITY REPORT FOR THE WEEK ENDING  
JULY 9, 1927

Diphtheria	13	Typhoid fever	1
Last week	31	Last week	2
Diphtheria bacilli carriers	8	Measles	30
Scarlet fever	40	Last week	47
Last week	23	Whooping cough	25
		Last week	12

Bronchopneumonia	8	Pneumonia, lobar	13
Cerebrospinal meningitis	1	Septic sore throat	3
Chickenpox	36	Tuberculosis, pulmonary	21
German measles	7	Tuberculosis, other forms	7
Influenza	2	Gonorrhoea	17
Mumps	21	Syphilis	28

## DISEASE INCIDENCE IN CONNECTICUT—WEEK ENDING JULY 9

DISEASE	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442	2443	2444	2445	2446	2447	2448	2449	2450	2451	2452	2453	2454	2455	2456	2457	2458	2459	2460	2461	2462	2463	2464	2465	2466	2467	2468	2469	2470	2471	2472	2473	2474	2475	2476	2477	2478	2479	2480	2481	2482	2483	2484	2485	2486	2487	2488	2489	2490	2491	2492	2493	2494	2495	2496	2497	2498	2499	2500	2501	2502	2503	2504	2505	2506	2507	2508	2509	2510	2511	2512	2513	2514	2515	2516	2517	2518	2519	2520	2521	2522	2523	2524	2525	2526	2527	2528	2529	2530	2531	2532	2533	2534	2535	2536	2537	2538	2539	2540	2541	2542	2543	2544	2545	2546	2547	2548	2549	2550	2551	2552	2553	2554	2555	2556	2557	2558	2559	2560	2561	2562	2563	2564	2565	2566	2567	2568	2569	2570	2571	2572	2573	2574	2575	2576	2577	2578	2579	2580	2581	2582	2583	2584	2585	2586	2587	2588	2589	2590	2591	2592	2593	2594	2595	2596	2597	2598	2599	2600	2601	2602	2603	2604	2605	2606	2607	2608	2609	2610	2611	2612	2613	2614	2615	2616	2617	2618	2619	2620	2621	2622	2623	2624	2625	2626	2627	2628	2629	2630	2631	2632	2633	2634	2635	2636	2637	2638	2639	2640	2641	2642	2643	2644	2645	2646	2647	2648	2649	2650	2651	2652	2653	2654	2655	2656	2657	2658	2659	2660	2661	2662	2663	2664	2665	2666	2667	2668	2669	2670	2671	2672	2673	2674	2675	2676	2677	2678	2679	2680	2681	2682	2683	2684	2685	2686	2687	2688	2689	2690	2691	2692	2693	2694	2695	2696	2697	2698	2699	2700	2701	2702	2703	2704	2705	2706	2707	2708	2709	2710	2711	2712	2713	2714	2715	2716	2717	2718	2719	2720	2721	2722	2723	2724	2725	2726	2727	2728	2729	2730	2731	2732	2733	2734	2735	2736	2737	2738	2739	2740	2741	2742	2743	2744	2745	2746	2747	2748	2749	2750	2751	2752	2753	2754	2755	2756	2757	2758	2759	2760	2761	2762	2763	2764	2765	2766	2767	2768	2769	2770	2771	2772	2773	2774	2775	2776	2777	2778	2779	2780	2781	2782	2783	2784	2785	2786	2787	2788	2789	2790	2791	2792	2793	2794	2795	2796	2797	2798	2799	2800	2801	2802	2803	2804	2805	2806	2807	2808	2809	2810	2811	2812	2813	2814	2815	2816	2817	2818	2819	2820	2821	2822	2823	2824	2825	2826	2827	2828	2829	2830	2831	2832	2833	2834	2835	2836	2837	2838	2839	2840	2841	2842	2843	2844	2845	2846	2847	2848	2849	2850	2851	2852	2853	2854	2855	2856	2857	2858	2859	2860	2861	2862	2863	2864	2865	2866	2867	2868	2869	2870	2871	2872	2873	2874	2875	2876	2877	2878	2879	2880	2881	2882	2883	2884	2885	2886	2887	2888	2889	2890	2891	2892	2893	2894	2895	2896	2897	2898	2899	2900	2901	2902	2903	2904	2905	2906	2907	2908	2909	2910	2911	2912	2913	2914	2915	2916	2917	2918	2919	2920	2921	2922	2923	29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# NOTICES

## NEW CANCER CLINIC AT PONDVILLE HOSPITAL

THE most recent development in the State's program for cancer control is the announcement of a weekly clinic at the Pondville Hospital. The clinic will be conducted as a form of out-patient service as are the other clinics which are being opened in connection with various hospitals in the state. Dr. Ernest Daland, chief of the Visiting Staff, is chief of the clinic as well.

The social worker of the cancer section of the Department will have charge of social service in the clinic.

A committee of citizens will be appointed in the Fall to assist in educational work in the towns adjacent to the Hospital.

Patients have already shown a disposition to come to this clinic from unexpectedly long distances. This is taken to be an indication that eventually a rather large out-patient service may be built up in spite of the remoteness of the location.

The hour of the clinic which is the sixth in the chain of cancer clinics which are being developed in the state, is from 1 to 2 p. m. on Thursdays.

## UNITED STATES PUBLIC HEALTH SERVICE

### CHRONOLOGICAL LIST OF CHANGES OF DUTIES AND STATIONS OF COMMISSIONED AND OTHER OFFICERS OF THE UNITED STATES PUBLIC HEALTH SERVICE

JUNE 29, 1927

Assistant Sanitary Engineer Frederick J. Moss—Directed to proceed from Chicago, Ill., to Montreal, Can., and return, for temporary duty in connection with the investigation of an epidemic of typhoid fever—June 18, 1927.

Surgeon G. W. McCoy—Directed to proceed from Washington, D. C., to Martin's Ferry, Ohio, and Carville, La., and return, to investigate a suspected case of leprosy—June 22, 1927.

Surgeon Joseph Goldberger—Directed to proceed from Washington, D. C., to Savannah, Ga., and return, in connection with field investigations of typhus fever—June 23, 1927.

Sanitary Engineer Leslie C. Frank—Directed to proceed from New York City to Washington, D. C., June 24, for conference at the Bureau, returning to station at Montgomery, Ala., upon completion of conference—June 23, 1927.

Assistant Surgeon E. R. Pelikan—Relieved from duty with the United States Coast Guard and assigned to duty at U. S. M. H. No. 19, San Francisco, Calif.—June 23, 1927.

Assistant Surgeon (R) E. L. Graydon—Bureau orders of June 13, 1927, directing him to proceed from Atlanta, Ga., to Baltimore, Md., for duty at U. S. M. H. No. 1, revoked. Directed to proceed from Atlanta, Ga., to Norfolk, Va., for assignment to duty at U. S. M. H. No. 82—June 23, 1927.

Assistant Surgeon (R) Donald A. Kendall—Relieved from duty at Norfolk, Va., and assigned to duty at U. S. M. H. No. 1, Baltimore, Md.—June 23, 1927.

Junior Pharmacist S. H. Butler—Directed to proceed from McCall Creek, Miss., to Norfolk, Va., for

assignment to duty at U. S. M. H. No. 82—June 23, 1927.

Surgeon J. G. Wilson—Directed to proceed from El Paso, Texas, to Presidio, Texas, and return, for temporary duty at the United States Quarantine Station—June 24, 1927.

Assistant Surgeon (R) W. H. Henderson—Ordered to active duty under terms of commission and directed to proceed from Portsmouth, Ohio, to Chicago, Ill., for assignment to duty at U. S. M. H. No. 5—June 24, 1927.

Acting Assistant Surgeon M. J. Perkins—Directed to proceed from Corpus Christi, Texas, to Galveston, Texas, and return, for temporary duty at the United States Quarantine Station at Galveston—June 24, 1927.

Surgeon R. H. Heterick—Directed to proceed from Los Angeles, Calif., to Hollywood, Calif., and return, to investigate a claim against the United States Employees' Compensation Commission—June 25, 1927.

Surgeon H. M. Manning—Directed to proceed from Marcus Hook, Pa., to Rosebank, S. I., N. Y., and return, for temporary duty—June 25, 1927.

Assistant Surgeon (R) R. C. Green—Ordered to active duty under terms of commission and directed to proceed from Chicago, Ill., to Stapleton, N. Y., for assignment to duty at U. S. M. H. No. 21—June 25, 1927.

Assistant Surgeon (R) J. W. Myers—Ordered to active duty under terms of commission and directed to proceed from Chicago, Ill., to New Orleans, La., for assignment to duty at U. S. M. H. No. 14—June 25, 1927.

Assistant Surgeon (R) A. E. Snowe—Ordered to active duty under terms of commission and directed to proceed from Boston, Mass., to Stapleton, N. Y., for assignment to duty at U. S. M. H. No. 21—June 25, 1927.

Surgeon W. F. Tanner—Relieved from duty at Stuttgart, Germany, and assigned to duty at Hamburg, Germany—June 27, 1927.

Senior Surgeon C. H. Lavinder—Directed to proceed from New York City to Washington, D. C., and return, for conference at the Bureau June 30—June 28, 1927.

Senior Surgeon E. K. Sprague—Directed to proceed from Ellis Island, N. Y., to Washington, D. C., and return, for conference at the Bureau June 30—June 28, 1927.

Surgeon L. D. Fricks—Directed to proceed from Seattle, Wash., to Winthrop, Wash., and return, to investigate a claim against the United States Employees' Compensation Commission—June 28, 1927.

Surgeon W. C. Rucker—Directed to proceed from New Orleans, La., to Washington, D. C., and return, to accompany an insane patient to St. Elizabeth's Hospital—June 28, 1927.

Surgeon A. R. Sweeney—Directed to proceed from Boston, Mass., to Bridgeport, Conn., New York City, Philadelphia, Pa., and Chicago, Ill., to obtain the custody of leper patients to accompany to U. S. M. H. No. 66, Carville, La., returning to station upon completion of duty—June 28, 1927.

Sanitary Engineer H. R. Crohurst—Bureau orders of June 16, 1927, amended so as to direct him, before returning to station from Montreal, Can., to proceed to Washington, D. C., for conference at the Bureau—June 28, 1927.

Assistant Surgeon H. L. Skinner—Directed to proceed from Ellis Island, N. Y., to Philadelphia, Pa., and Chicago, Ill., to obtain the custody of certain leper patients to accompany to U. S. M. H. No. 66, Carville, La., returning to station upon completion of duty—June 28, 1927.

## BOARDS CONVENED

A board of officers convened to meet at Philadelphia, Pa., at the call of the chairman, to reexamine an alien—June 22, 1927. Detail for the board: Sur-

geon H. M. Manning, A. A. Surgeon Leon Van Horn, A. A. Surgeon Horace Phillips.

Official:

H. S. CUMMING, *Surgeon General.*

CHRONOLOGICAL LIST OF CHANGES OF DUTIES AND STATIONS OF COMMISSIONED AND OTHER OFFICERS OF THE UNITED STATES PUBLIC HEALTH SERVICE

JULY 6, 1927

Acting Assistant Surgeon Fred T. Foard—Relieved from duty at Stockton, Calif., and assigned to duty at Jackson, Miss., in connection with the prevention of the interstate spread of smallpox and other epidemic diseases in the flooded area—June 23, 1927.

Surgeon C. W. Vogel—Relieved from duty at Hamburg, Germany, and assigned to duty at Stuttgart, Germany—June 27, 1927.

Surgeon R. M. Grimm—Directed to proceed from Washington, D. C., to Owings Mills, Md., July 5, and return, in connection with field investigations of mental hygiene—June 29, 1927.

Junior Pharmacist George B. Hutchison—Directed to proceed from Lexington, Ky., to New Orleans, La., for assignment to duty at U. S. M. H. No. 14—June 29, 1927.

Surgeon R. R. Spencer—Directed to proceed from Hamilton, Mont., to Browning, Mont., and return, to investigate a claim against the United States Employees' Compensation Commission—July 1, 1927.

Surgeon H. F. White—Bureau orders of May 13, 1927, directing him to proceed from Baltimore, Md., to Lewes, Del., and return, to inspect quarantine equipment at the Delaware Breakwater Quarantine, revoked—July 1, 1927.

Passed Assistant Surgeon R. L. Lawrence—Directed to report to the Medical Director, United States Employees' Compensation Commission, for duty—July 1, 1927.

Acting Assistant Surgeon C. E. Kingman—Directed to report to the Commandant, United States Coast Guard, for assignment to duty—July 1, 1927.

Assistant Surgeon General S. B. Grubbs—Directed to proceed from Washington, D. C., to Rosebank, S. I., N. Y., and Ellis Island, N. Y., July 6, and return, for conferences relative to administrative matters in connection with quarantine and immigration—July 2, 1927.

BOARD CONVENED

A board of officers convened to meet at Philadelphia, Pa., at the call of the chairman, to reexamine an alien—June 30, 1927. Detail for the board: Surgeon H. M. Manning, A. A. Surgeon Leon Van Horn, A. A. Surgeon Horace Phillips.

Official:

H. S. CUMMING, *Surgeon General.*

CHRONOLOGICAL LIST OF CHANGES OF DUTIES AND STATIONS OF COMMISSIONED AND OTHER OFFICERS OF THE UNITED STATES PUBLIC HEALTH SERVICE

JULY 13, 1927

Surgeon M. F. Haralson—Directed to proceed from New Orleans, La., to Port Arthur, Texas, and return, on July 2, and twice a month thereafter, and return, for the purpose of supervising the work at that place—July 1, 1927.

Associate Sanitary Engineer I. W. Mendelsohn—Directed to proceed from Chicago, Ill., to Pinebluff, Ark., and such other places in the State of Arkansas as may be necessary, and return, for duty in connection with the prevention of the spread of epidemic diseases in the flooded area—July 1, 1927.

Surgeon J. W. Mountin—Relieved from duty at Jefferson City, Mo., and assigned to duty at Nash-

ville, Tenn., in connection with the prevention of the spread of epidemic diseases in the flooded area—July 2, 1927.

Sanitary Engineer Leslie C. Frank—Directed to proceed from Montgomery, Ala., to Boston, Mass., July 21, and return, in connection with milk investigations—July 5, 1927.

Assistant Surgeon G. M. Kunkel—Relieved from duty at New Orleans, La., and assigned to duty at U. S. M. H. No. 3, Buffalo, N. Y.—July 5, 1927.

Senior Surgeon Tallafiero Clark—Directed to proceed from Paris, France, to Berlin, Germany, August 1, and return, to serve as chairman of a board—July 6, 1927.

Surgeon R. M. Grimm—Relieved from duty at Washington, D. C., and assigned to duty at Antwerp, Belgium—July 6, 1927.

Surgeon D. E. Robinson—Relieved from duty at London, England, and assigned to duty at Naples, Italy—July 6, 1927.

Surgeon L. O. Weldon—Relieved from duty at Liverpool, England, and assigned to duty at Genoa, Italy—July 6, 1927.

Passed Assistant Surgeon L. A. Fullerton—Directed to proceed from Oslo, Norway, to Berlin, Germany, for examination, August 1, for promotion—July 6, 1927.

Assistant Surgeon A. J. Aselmeyer—Relieved from duty at Washington, D. C., and assigned to duty at Naples, Italy—July 6, 1927.

Assistant Surgeon R. A. Vonderlehr—Relieved from duty at Washington, D. C., and assigned to duty at Cobh, Irish Free State—July 6, 1927.

Surgeon W. C. Billings—Relieved from duty at New York City and assigned to duty at Liverpool, England—July 7, 1927.

Surgeon J. S. Boggess—Relieved from duty at Detroit, Mich., and assigned to duty at London, England—July 7, 1927.

Surgeon M. V. Ziegler—Relieved from duty at Cobh, Irish Free State, and assigned to duty at Prague, Czechoslovakia—July 7, 1927.

Passed Assistant Surgeon W. Y. Hollingsworth—Relieved from duty at Antwerp, Belgium, and assigned to duty at Palermo, Italy—July 7, 1927.

Surgeon L. L. Lumsden—Directed to proceed from Washington, D. C., to Ann Arbor, Mich., and such other points in the State of Michigan and the States of Iowa, Missouri, Kansas and Oklahoma as may be necessary, and return, in connection with rural sanitation work—July 8, 1927.

Surgeon Grover A. Kempf—Directed to proceed from Washington, D. C., to Saluda, N. C., and return, to give a series of lectures before the Southern Pediatric Seminar, which is to be held in that city August 1-7—July 9, 1927.

Assistant Surgeon General Thomas Parran, Jr.—Directed to proceed from Washington, D. C., to Philadelphia, Pa., and New York City, July 12, and return, in connection with venereal disease control measures—July 11, 1927.

Surgeon L. R. Thompson—Directed to proceed from Washington, D. C., to Cincinnati, Ohio, Chicago, Ill., Lead, S. D., and other places in South Dakota as may be necessary, and return, in connection with field investigations of industrial hygiene—July 11, 1927.

Acting Assistant Surgeon O. C. Wenger—Bureau orders of June 30, 1927, directing him to proceed from Hot Springs, Ark., to Oklahoma City and such other places in the State of Oklahoma as may be necessary, revoked. Directed to proceed from Hot Springs, Ark., July 20, to Chicago, Ill., thence to Oklahoma City and such other places in the State of Oklahoma as may be necessary, and return, in connection with venereal disease control measures—July 11, 1927.

Surgeon W. H. Frost—Directed to proceed from Baltimore, Md., to Cincinnati, Ohio, and return, in connection with field investigations of stream pollution—July 12, 1927.

Surgeon C. E. Waller—Directed to proceed from Washington, D. C., to New York City, July 12, and return, for conference with representatives of the Rockefeller Foundation regarding cooperative plan for prevention of the spread of epidemic diseases in the flooded area—July 12, 1927.

Passed Assistant Dental Surgeon (R) A. T. Ellison—Relieved from duty at Atlantic City, N. J., and assigned to duty at U. S. M. H. No. 82, Norfolk, Va.—July 12, 1927.

Acting Assistant Surgeon B. A. Wight—Directed to proceed from New Orleans, La., to Washington, D. C., for assignment to duty with the United States Coast Guard—July 12, 1927.

#### BOARDS CONVENED

A board of officers convened to meet at Berlin, Germany, August 1, to examine an officer of the Regular Corps for promotion—July 6, 1927. Detail for the board: Senior Surgeon Tallaferro Clark, Surgeon E. A. Sweet, Surgeon R. P. Sandidge.

Official:

H. S. CUMMING, *Surgeon General.*

### REPORTS AND NOTICES OF MEETINGS

#### HAMPDEN DISTRICT MEDICAL SOCIETY

The regular summer meeting of the Society was held at the U. S. Service Veterans' Hospital at Leeds, Massachusetts, on Tuesday, July 26, at 4 P. M. The Society was the guests of Dr. A. H. Pierce, Commander of the hospital.

There was a clinic, a tour of inspection of the hospital and refreshments at 5.45 P. M. Dr. Pierce invited the three other western Massachusetts districts to unite with the Hampden District at this meeting.

#### A MEETING OF THE WEST END NEIGHBORHOOD CONFERENCE

A MEETING of the West End Neighborhood Conference was held at the Health Unit, 17 Blossom Street, Thursday, July 21, 1927, at 4 P. M.

The committee on street play has been working on the summer recreational plan and two recreational workers have been employed. A report of its activities was rendered.

CHARLES F. WILINSKY, M.D.,  
*Sec'y, West End Neighborhood Conference.*

#### THE MEETING OF THE MASSACHUSETTS ASSOCIATION OF BOARDS OF HEALTH

As a part of the informative discussion which has been undertaken by the Massachusetts Department of Public Health, in the matter of proper regulations governing the pasteurization of milk, the Massachusetts Association of Boards of Health devoted its summer meeting, that of Thursday, July 21, to a cooperative educational effort. The general subject of the meeting was "Positive Pasteurization," the speakers were national authorities, George W. Putnam, Chief of the Bureau of Dairy Products, Chicago

Health Department, and Leslie C. Frank, of the U. S. Public Health Service; the place was the charming estate of the Worcester Country Club just within the city limits toward West Boylston and the company assembled included the administrative and health officers of Massachusetts cities and towns to the number of nearly one hundred.

After a brief word of welcome by Mr. Michael J. O'Hara, Mayor of Worcester, Mr. Putnam took the floor, followed by Mr. Frank. The paper of Mr. Putnam dealt with the apparatus for pasteurizing, and the illustrations on the screen outlined the principal practical defects in each of the various types of machines and their remedies. From the point of view that pasteurization requires the heating of the milk to a given definite temperature and the retention of it at that temperature for a definite length of time, it must be realized that some of the appliances in use fail to live up to the requirements, and permit milk which has not been properly heated or properly held to pass into the "pasteurized" body.

In general in a holding outfit, these failures may be due to dead ends, where the milk remains comparatively cold, yet is drawn off with the general body of milk; cold outlets, which keep some of the milk comparatively cool; leaky outlets, which permit milk that has not been properly heated to pass round the valves; and foam and splash, the former rising above the surface of the heated milk into air that may be lower in temperature, and the latter bringing milk into contact with a comparatively cold cover to the tank.

For each kind of failure there has been devised some remedy. Dead ends may be eliminated once one has realized that they are there; the same is true of cold outlets; leaky outlets may be avoided by modern valves which pass any leaked material to receptacles other than the body of the milk. Foam may be due to the separator or to causes in the flow. The first kind may be eliminated by better separators, and if it persists from flow or other cause, the foam may be pasteurized by having the air above the milk into which it projects, of a pasteurizing temperature. For this steam may be used and without detriment to the product. Splash is usually caused by defective flow pipes, and should not be difficult to remedy.

Ineffective pasteurization may be due to defective thermometers, which do not give true readings. This may be avoided by using a mercury indicating thermometer in each vat.

Passing to other methods of pasteurization. Mr. Putnam stated that the flash method has been used, but has been rejected by health officers because of unsatisfactory results. This subjects the milk to a high temperature for a very short time.

Electrical processes for pasteurizing milk seem still to be in an experimental stage. Good

authorities differ here and only one State has accepted the electrical process as a legal procedure.

Between pasteurization and bottling there may be a period of possible exposure of the milk to dust or to fly contamination. This may be avoided by shields or by the use of special rooms closed to other purposes.

In closing the speaker emphasized the fact that the defects that have been evolved in developing processes of pasteurization must not be permitted to belittle the importance of process as a safeguard to a most important food supply. Mr. Putnam, formerly State engineer in a Mississippi Valley commonwealth, is the official who has been advisory to Dr. Bundensen, Health Commissioner of Chicago, in the recent radical changes in milk regulations in that city.

In beginning his address Mr. Frank plainly put the case of safeguarding milk as he views it from three standpoints, as the father of a family of children, as a former proprietor of a dairy and as a one-time health officer of Dallas, Texas. His question was constantly, "As a dairyman who has been a health officer, and in whom consumers have additional confidence for this reason, what is the proper action to safeguard the people?" He said first in effect, that it might be a serious question in the minds of many whether in view of an unfortunate outbreak of milk-borne disease, like the recent one at Montreal, we are right in depending on pasteurization.

"Be a dairyman," said Mr. Frank, "scrutinize disease, scrutinize prevention,—what conditions will help towards safety?" He noted that while there are quite a number of diseases that may be conveyed by milk, there would be time to consider only three, tuberculosis, typhoid fever and septic sore throat.

It is obvious from our present knowledge that the testing of cattle is very important. "This done," said the speaker, "can the dairyman assert to the consumer that the supply is safe?" The herd is tested, the reactors are taken out and in some months or a year with a subsequent test, a reactor is found in the herd. Who can say how long that cow has been a potential menace to the raw milk supply of that dairyman? The answer here is that pasteurization provides the only known security.

The dairyman finds out that of the outbreaks due to milk a large majority, about three-quarters, are typhoid. "What is he to do?" There is the testing for carriers. Alabama has a new technique by Haven, which can do good work. In this State it has been determined that three out of every hundred dairymen are carriers. Possibly this is a fair rating of the population as a whole. Then it is to be considered that carriers may be intermittent and that to detect them is a costly process. With raw milk, can the dairyman say, "We are safe"?

Then there is septic sore throat. "What can be done?" Here the speaker asserted that he did not know. It is an explosive malady, and no precautions that are available will ensure the safety of raw milk.

Incidental to his discussion the speaker drew upon his own experiences as a dairyman, who with the experience of a health officer was trying to carry on a safe dairy. One day the records showed about five hundred gallons that had not been properly pasteurized. The foreman's answer was that an institution made a call for this milk to be delivered at once. "If you can not furnish it, we shall try your competitor," was the accompanying admonition. What else could be done but deliver it 'as is,' if the trade was to be retained? One day a milkster reported asking leave on account of dysentery. In reply to questions it was found that he was ill the day before, but had felt forced to milk because of short-handedness in the milking squad.

"With this experience," said Mr. Frank, "I said, 'Pasteurization for my babies and my customers.'"

The speaker was strong in his assertion that there is no real basis for claiming that raw milk is safe. But, can the public health officer require that all milk shall be pasteurized? Here one comes upon the difficulty that no official can proceed faster than the speed of education of his people. Comparatively few communities as yet will support complete pasteurization of the milk supply. Under the circumstances it seems most advisable to grade the milk, and the speaker suggested grades A, B and C, all pasteurized, but of different standards, so that consumers may know what they are getting. In the production of milk as in any other process, slips will occur, and the matter must be treated with a margin of safety.

Dr. George H. Bigelow, State Commissioner of Public Health, joined in the discussion with the presentation of various Massachusetts problems.

## BOOK REVIEWS

*Practical Gastroscopy.* By JEAN RACHET, M.D., Assistant to the St. Antoine Hospital, Paris, France. Authorized Translation by FRED F. IMANITOFF. Published by William Wood & Co.

This small volume of one hundred and thirty-eight pages demonstrates a method of indirect inspection of the interior of the stomach, similar to that commonly done with the cystoscope in the urinary bladder. The author apparently has had considerable experience with the method and finds it a satisfactory means of diagnosis in gastric lesions; also an aid in the direct application of certain forms of treatment.

Gastroscopy would undoubtedly be an additional help to our present methods of examina-



tion, but would require a considerable amount of experience to use the apparatus. There are a number of gastric lesions affecting the mucosa which might be correctly diagnosed in this way that are missed by methods in common use. On the other hand, the number of cases that could be definitely diagnosed by this method alone, to the exclusion of other methods, would be relatively small. It is conceivable that in a coöperative patient, particularly, where the healing of a gastric lesion needed observation, that this would be a valuable instrument. It is doubtful, however, that this will ever become a popular method of examination, for several reasons; primarily because our present methods of diagnosis, especially with the Roentgen Ray, are satisfactory, in a large majority of gastric cases. Also, the method demonstrated in this book, although highly desirable, i. e., actual visualization of a lesion, would certainly be a difficult procedure to carry out on a considerable number of patients. The Laryngologists who are already familiar with the use of the oesophagoscope could add this piece of apparatus to their armamentarium with considerable ease, and it would certainly be a help in the diagnosis and treatment of certain obscure gastric lesions.

The book is well written, the technique is accurately described, and certainly the author deserves considerable credit for this ingenious method of direct observation of the gastric mucosa.

*Interpreters of Nature: Essays* by SIR GEORGE NEWMAN, K.C.B., M.D., Hon. D.C.L., LL.D. Faber & Gwyer Limited, London, 1927. 296 pages.

This volume is a collection of essays and addresses prepared at different times between 1903 and 1926 by the Chief Medical Officer of the British Ministry of Health. The table of contents gives a good idea of the nature of the book:

1. The Great Paduans—A Century of Medicine at Padua.
2. Thomas Sydenham, Reformer of English Medicine.
3. Hermann Boerhaave—The Disciples of Boerhaave in Edinburgh.
4. John Hunter—The Private Practitioner as Pioneer in Preventive Medicine.
5. John Keats: Apothecary and Poet.
6. The Character of Louis Pasteur.
7. William Osler—A Physician of Two Continents.
8. Modern Interpreters—Fifty Years' Progress in Public Health.
9. Future Interpreters—Everyman in Preventive Medicine.

These essays hold one's interest because they deal with aspects in the lives of men outstanding in the history of medicine which are not

found in the formal text-books. Besides one can never tire reading of such men as Galileo, Vesalius, Sydenham, John Hunter and Louis Pasteur, especially when written in the charming style that reminds one so much of William Osler. The Essays on Pasteur and Osler are particularly delightful, and the fact that Sir Newman includes William Osler in his group of "interpreters of nature" may be a forecast of what the generations to come will think of this noble physician.

It is a splendid little book that will give one a fine sense of relaxation after the trials of a hard day of medical practice.

*Modern Medicine: Its Theory and Practice.*

Edited by SIR WILLIAM OSLER, Bart., M.D., F.R.S. Third Edition, Thoroughly Revised. Re-edited by THOMAS McCRAE, M.D., Assisted by ELMER H. FUNK, M.D. Volume IV. Lea and Febiger, Philadelphia, 1927.

The fourth volume of this third edition of Osler's System is divided into two parts: Part I, Diseases of the Respiratory Tract; and Part II, Diseases of the Circulatory System.

The first chapter of Part I, entitled "The Physiology of Respiration," is written by George W. Norris and Thomas M. McMillan. This replaces the introductory chapter of the first edition written by Thomas R. Brown. In the Chapter on Diseases of the Nasopharynx, Pharynx and Tonsils by Francis R. Packard, sections on Vincent's Angina and Agranulocytic Angina have been added. The chapter on "Diseases of the Bronchi" by Alexander McPhedron has been considerably condensed, the section on acute bronchitis having been entirely rewritten and paragraphs on war gassing added. A new section on hemorrhagic bronchitis (non-tuberculous) discusses broncho-spirochaetosis, broncho-amoebiasis and the broncho-mycoses. Hay fever and asthma are treated in a separate chapter written by F. M. Rackemann. A section on collapse of the lungs has been added to the chapter on "Diseases of the Lungs," and pneumoconiosis is considered in a separate chapter by H. R. M. Landis. The chapter on pneumothorax is written by F. T. Lord, and a new chapter on Diseases of the Diaphragm by Dr. Landis concludes Part I.

The introductory chapter of Part II, entitled "General Considerations in Cardio-Vascular Disease," by C. F. Hoover, and the following chapter on "Diseases of the Pericardium" by Alexander McPhedron have been entirely rewritten. A new chapter by Sir Thomas Lewis on "The Rate and Mechanism of the Heart Beat" brings the system up to date on this important subject. A chapter on acute endocarditis by J. B. Herrick replaces the one on the same subject written by the late Sir William Osler. The chapter on functional disease of the heart

has been entirely rewritten to conform to modern conceptions. Maude Abbott has greatly amplified her chapter on congenital cardiac disease, which now covers two hundred pages. The chapters on diseases of the arteries by the late Sir William Osler have been revised slightly by C. P. Howard; a section on thrombo-angitis obliterans has been added. Blumer has rewritten the section on thrombosis in his chapter on "Thrombosis, Embolism and Phlebitis."

*Pathohistologie der Zähne.* (Pathohistology of the Teeth.) By Dr. Med., Dr. Med. dent. h. c. HERMANN EULER, Professor at University of Breslau, Germany, and director of the Dental Institute and Dr. Med. dent. WILHELM MEYER. First edition, in German, 353 pages, 422 illustrations (8 in color), Munich, Germany. J. F. Bergman, 1927. Price R.M. 48, bound R.M. 49.60.

The senior author of this highly scientific monograph is well-known through his publications in the German dental literature. Dr. Meyer's mastery of the photographic technique has added a great deal of value to the book. The excellent high power photomicrographs make it possible to eliminate the use of drawings and therefore present "not what one seems to see but what actually has been seen in the microscope."

The authors limit this work to the teeth proper. The material has been collected for years for the use in lectures and laboratory and was used in this book not only for a study of the pathohistology of the teeth but with special consideration of the pathobiology.

Chapters I and II treat of the disturbances arising during the developmental stage of the teeth, also the effect of local infection and trauma of the tooth germ. The vital topic, disturbances of the calcium metabolism, is here included, hypoplasia of the enamel in rickets and the formation of the Hutchinson's teeth.

Chapter III deals with the formation of secondary dentine the cause of which may be a physiological or pathological process resulting in changes in the dental pulp.

Chapter IV deals with traumatic changes in acute and chronic trauma, tooth fractures with and without luxation.

Chapter V is devoted to dental caries. This important subject is taken up in all its phases. Special interest is given the protective action of the cuticula dentis—Nasmyth's membrane—which is the hornified remnant of the enamel organ covering the enamel of the tooth.

The degree of calcification and the presence of organic structures in the enamel are laid stress on as predisposing factors. The bacterial activity is dealt with at length, direct effect as well as the resulting reaction in the more distant tissue being discussed and illustrated.

In Chapter VI the diseases of the dental pulp are taken up: Hyperemia, acute and chronic pulpitis, necrosis and retrograde processes.

The subject of "Dental pulp in General disease" is limited to a citation from Graff (*Deutsch. Med. Wochenschr.* 1922 H40, S1346), who found in one case of endocarditis with sepsis an embolus with gram positive cocci in the vessels of a lower bi-cuspid and in two cases of purulent meningitis, hyperemia and oedema of the pulps with diplococcus.

Chapter VIII gives an excellent exposition of the pathology of the cementum and periodontal membrane, with formation of the periapical granuloma and periodontal cysts. Disturbances of the vitality of the cementum are illustrated by brilliant photomicrographs. The Pathology of Parodontitis chronica marginalis progressiva (*Pyorrhea Alveolaris*) concludes this part.

While there is not very much new in this chapter the different pathological changes are well discussed and illustrated. It is to be regretted, however, that the important subject, general health in relation to these lesions, is disposed of (on page 302) with but a few remarks. This forms a marked contrast to the otherwise careful and all including description of the local changes produced by periapical infection.

The book ends with a description of technical procedures by Dr. W. Meyer, dealing especially with the preparing and staining of the sections and also giving some valuable points in connection with the making of photomicrographs.

In conclusion the book can be highly recommended as a modern treatise on the microscopic pathology of the teeth. The illustrations alone are highly instructive and some of them are exceptionally fine. At the end of each chapter there is an excellent bibliography of related work of German origin. References of English and American literature and publications of research work are conspicuous by their absence.

*Adapted Group Gymnastics.* By LILLIAN CURTIS DREW, Director of Department of Corrective Gymnastics, Central Branch Y. W. C. A., New York City; Assistant Director, Central School of Hygiene and Physical Education, New York City; Instructor in Corrective and Remedial Gymnastics and Kinesiology, Central High School of Hygiene and Physical Education and New York University, New York City. Illustrated. Lea and Febiger, Philadelphia, 1927.

"Adapted Group Gymnastics" by Lillian Curtis Drew is a good handbook for the teacher in secondary schools or for one dealing with older groups. It makes use of the best of the Danish work, incorporating with it the extensive "body-freeing" exercises of Neils Buhk, in which the common faults of posture are to be guarded against constantly. The scope and presentation of exercises are excellent.

*International Clinics Vol. 2 Thirty Seventh Series, June 1927. J. B. Lippincott Co.*

This volume conforms closely to those which have preceded it in make-up and contents. It contains a list of contributors, a list of articles and a list of illustrations. The leading articles are divided into Diagnosis and Treatment, Medicine, Surgery, Public health, Medical history, Travel Clinics, Post-Graduate Study and the address of President Coolidge before the Washington meeting of the American Medical Association this year, and Gleanings from papers read at the Washington meeting.

Particularly interesting or valuable are the articles on Allergic diseases in relation to climate, by W. S. van Leeuwen; A heart block clinic by L. F. Bishop; Bunion, its cause and cure, by H. A. Robinson; Health supervision of Country Day schools, by R. M. Smith; and Caring for the health of the preparatory school student, by S. T. Nicholson, also the article on Hygiene by W. S. Connell.

The illustrations and plates are of high order and the volume of usual merit.

*Malarial Psychoses and Neuroses*, with Chapters Medico-Legal, and on History, Race Degeneration, Alcohol, and Surgery in Relation to Malaria. By WILLIAM K. ANDERSON, M.D., F.R.F.P.S. (Glas.) Humphrey Milford, Oxford University Press, London, 1927. 395 pages.

This, so far as the reviewer knows, is the only complete treatise on the nervous manifestations of malaria. It seems unusual that this should be so. The disease has been known for over two thousand years and its most characteristic feature, the paroxysm, is a neurological phenomenon. The author has filled this gap in the literature of malaria with remarkable success. He has drawn largely from his own very extensive experiences, and the book is filled with many brief but adequate case reports. In addition, he has made a thorough study of the literature and many of his illustrations are from other sources. He seems not to have missed any important aspect of the disease and his long list of chapters includes notes on such unusual topics as "the medico-legal aspect of malaria" and "surgery and malaria."

The book is superbly issued, with numerous colored plates and a complete bibliography and index. It can be highly recommended as an excellent monograph covering a little-known field of medicine.

*Should We Be Vaccinated?* By BERNHARD J. STERN. 1927. Pp. 146. Harper and Brothers.

Physicians are used to considering the vaccination problem solely from its medical and

public health aspects. In this little book it is considered from the religious and political aspects as well as from the public health point of view in an attempt to unravel the reasons for the perennial prejudice against this life-saving measure. The text is fortified with numerous references and the entire volume gives evidence of very careful study of the problem and careful avoidance of any appearance of partizanship or of prejudice. The early sections of the book are devoted to the controversies in the early days of vaccination and Jenner's relation to them. A particularly interesting portion is that dealing with the vaccination tracts and their relation with religious issues. The value of this volume is considerably enhanced by very rich references to important documents either for or against the practice. An interesting chapter is the one on the causes of opposition to vaccination.

*Principles of Physical Chemistry for Medical Students.* By P. M. TOONEY KERRIDGE. 1927. Pp. 129. Oxford Medical Publications.

The great emphasis laid on physiology in the English schools has naturally stimulated interest in the closely allied sciences and one of the most important of these is physical chemistry. For many students and practitioners a thorough course in physical chemistry demands too much time and, as a result, a number of smaller handbooks have been published attempting to give in small compass and fairly simple terms the more important facts. One of the best of these is this small book, simply written and well supplied with diagrams which serve to elucidate further the text. It fortunately does not presuppose any great degree of mathematical or physical knowledge.

*Clinical Physiology.* By ROBERT J. S. McDOWALL. 1927. D. Appleton & Co. Pp. 363.

This volume is to some extent reminiscent of Krehl and Hewlett. However, the emphasis is laid on the applications of physiology to the patient. It is remarkably up to date for a textbook and written in a pleasing style. One very interesting chapter is that on the "Physiological Principles in the Treatment of Emergencies," particularly with reference to cardiac and respiratory failure. The section on blood sugar and pancreatic efficiency is rather sketchily

treated and disappointing. A very useful bibliography is appended.

*Stammering, Its Cause and Cure.* By BENJAMIN NATHANIEL BOGUE, Indianapolis. Benjamin Nathaniel Bogue, 1926, pp. 279.

Advertising the "Bogue Institute" of Indianapolis and replete with "testimonials."

*Röntgen Rays in Dermatology.* By L. ARZT and H. FUHS. (William Wood and Company, Publishers.) Translated by C. Kevin O'Malley. Price \$6.00.

This book gives a very good survey of dermatological x-ray therapy. It describes German apparatus and methods and furnishes interesting points of view worth while to dermatologist and radiologist alike. The essentials of protection, accurate measurement of dosage, technic of exposure, filtration, etc., are well emphasized. It is worth noting that the authors advocate lightly filtered radiation rather than unfiltered for dermatological treatment. Injuries by x-ray and their treatment are considered, together with their medico-legal aspects. The last half of the book considers the treatment in detail of the various dermatoses in which x-ray therapy is indicated. The book has many practical points for those desiring instruction in such methods of treatment.

*A Primer for Diabetic Patients.* By RUSSELL M. WILDER. W. B. Saunders, Publishers.

This primer is an excellent one, particularly useful for medical students and general practitioners. The general principles of diabetic management are clearly outlined and the directions are made simple, particularly those for the laboratory tests. The physiology of nutrition is emphasized and food values are explained in detail. The questions of tolerance, coma, and the use of Insulin are perhaps more elaborately discussed than would seem advisable in the case of the patient alone, but the fundamental principles are admirably discussed for the use of the general practitioner. On the whole, this primer is a valuable addition to our defence against diabetes and should add much to the comfort of diabetic patients.

*An Outline History of Ophthalmology.* By THOMAS HALL SHASTID, M.D., Sc.D., F.A.C.S., LL.D., etc. Retail price \$1.25. Selling agent, George Wahr, Ann Arbor, Michigan.

A small volume of about thirty pages giving a short history of ophthalmology from its start in Babylon-Assyria to the present time. The subject is taken up briefly throughout various centuries touching on points of greatest importance. The book is extremely well written and makes most interesting reading.

*The Human Body in Pictures.* A Visual Text of Anatomy, Physiology and Embryology, by JACOB SARNOFF, M.D. Physicians and Surgeons Book Company, Brooklyn, New York. Pp. 120.

The book is a "manual" of a series of motion pictures, illustrating the development and physiology of the principal systems of the body. It is very difficult to see how the book itself could be of any value to men taking courses in a first-class medical school. The films, however, have been used successfully in the teaching of student nurses and in the instruction of hospital corpsmen in the Army.

*Pioneer Medicine in Western Pennsylvania.* By THEODORE DILLER, M.D. Paul B. Hoeber, Inc., New York, 1927, pp. 230.

The book covers a period, roughly, from 1750 to 1850, with a few remarks concerning men of the last half of the 19th century. It is almost entirely a history of the physicians who lived in Pittsburgh and of the medical societies formed by them. Most of the earlier physicians were military men. Although there is no outstanding name, the average is high and the work that they did was well done.

*Practical Nursing for Male Nurses in the R. A. M. C. and Other Forces.* By COLONEL E. M. HASSARD, A.M.S. (Retd.) and A. R. HASSARD. Second edition. William Wood & Co., New York, 1927. 407 pages.

A small but complete handbook covering all the procedures used in a well-equipped military hospital. In the second edition chapters on radiant heat, electricity, massage and insulin treatment have been added.